

DO PUBLIC-GOOD ORIENTED COURSES IN INDEPENDENT SCHOOLS
NURTURE THE DEVELOPMENT OF 21ST CENTURY SKILLS
IN HIGH SCHOOL STUDENTS?

Luana G. Nissan

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Master's Thesis Committee

Dwight F. Burlingame, Ph.D., Chair

Julie A. Hatcher, Ph.D.

Amada Torres, M.S.

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Luana G. Nissan

Do Public-Good Oriented Courses In Independent Schools Nurture The Development Of
21st Century Skills In High School Students?

Education is among the industries shifting today to answer evolving global needs and opportunities. Influential organizations and thought leaders are calling for reimagining of teaching and learning. To prepare students for college and professions, an increasing number of K-12 independent schools are beginning to focus on deep learning experiences and building key “21st century skills” and competencies. These schools are also interested in their *public purpose* both as institutional citizens of their local communities and to connect their students to local and global communities. These connections provide students with an authentic context for application of learning and for community contribution. There is also now an opportunity to coordinate curricular goals with developmental goals related to students’ social-emotional growth and social responsibility.

This study used online surveys taken by students and their teachers to explore whether high school courses with public good themes and experiences in independent schools nurture the development of 21st century skills in students. The eight skills studied were: Critical thinking, collaboration, communication, creativity and innovation, self-direction, global connections, local connections, and the use of technology. The skills were measured through frequency ratings of forty-eight classroom practices. Findings show that both students and teachers believe these courses do nurture each

skill – some with greater emphasis. Students reported critical thinking, communication, self-direction and making local connections as the skills most learned in their courses, while teachers reported that students most learned these same skills with the addition of collaboration. Teachers use a number of practices in the classroom to develop 21st century skills and most students found the practices relevant to their course.

Keywords: 21st century skills, K-12 education, independent schools, public good, public purpose, service learning

Dwight F. Burlingame, Ph.D., Chair

Table of Contents

Background

Introduction: <i>Why</i> and <i>How</i> Education in K-12 Schools Is Being Redefined for the 21 st Century	1
Purpose of the Study	10
Research Questions	12
Definition of Terms	13

Literature Review

A Focus on Public Good and Public Purpose in Independent Schools	17
Background on Service Learning and Civic-Mindedness in Schools	29

Research Methodology

Introduction	40
Research Design	42
Research Method	45
Site Selection Criteria	47
Survey Tool Reliability	48
Considerations and Limitations	49

Study Findings

Background	51
Two Schools With Similar Purpose	52
Key Findings	56
Critical Thinking Skills in Public Good Courses	62

Collaboration Skills in Public Good Courses	63
Communication Skills in Public Good Courses	63
Creativity And Innovation Skills in Public Good Courses	64
Self-Direction Skills in Public Good Courses	64
Global Connections in Public Good Courses.....	65
Local Connections in Public Good Courses.....	65
Use of Technology As A Tool For Learning in Public Good Courses	66
Assessing Student Learning of 21 st Century Skills	67
Teacher Surveys	67
Discussion of Findings	69

Further Research And Conclusion

Recommendations For Further Research.....	71
Conclusion	73

Appendices

Appendix A: Essential Capacities For The 21 st Century	76
Appendix B: Background Interview with School Administrator	78
Appendix C: Framework for 21 st Century Learning (P21).....	80
Appendix D: Survey for Teachers: “Measuring 21 st Century Skill Development in Service Learning and Public Good Courses in Independent High Schools”	82

Appendix E: Survey for Students: “Measuring 21 st Century Skill Development in Service Learning and Public Good Courses in Independent High Schools”	94
Appendix F: Recruitment Email for School Participation in Study	105
Appendix G: Study Information Sheet: Measuring 21 st Century Skill Development in Service Learning and Public Good Courses in Independent High Schools	106
Appendix H: Emails for School Administrator and Participating Teachers	110
Appendix I: Instructions for Administering and Completing the “21 st Century Skills” Surveys	112
Appendix J: Letter to Inform Parents / Guardians of Student Survey Participation	114
Appendix K: Indiana University Informed Consent Statement For “Measuring 21 st Century Skill Development in Service Learning and Public Good Courses in Independent High Schools”	115
Appendix L: Students’ Reporting on Critical Thinking Classroom Practices	117
Appendix M: Students’ Reporting on Collaboration Classroom Practices	119
Appendix N: Students’ Reporting on Communication Classroom Practices	121
Appendix O: Students’ Reporting on Creativity And Innovation Classroom Practices	123
Appendix P: Students’ Reporting on Self-Direction Classroom Practices.....	125

Appendix Q: Students' Reporting on Global Connections Classroom	
Practices	128
Appendix R: Students' Reporting on Local Connections Classroom	
Practices	130
Appendix S: Students' Reporting on Use of Technology As A Tool For	
Learning Classroom Practices.....	132
References	135
Curriculum Vitae	

List of Tables

Table 1: Mission Statements Of Founding Schools Of Private Schools With Public Purpose	24
Table 2: K-12 Service-Learning Standards for Quality Practice	32
Table 3: Goals of Civic Education	34
Table 4: Kinds of Citizens.....	39
Table 5: Examples of Measures of 21 st Century Competencies	41
Table 6: Comparison of Teacher Focus on Developing Skills and Student Learning of Each Skill	56
Table 7: Most Frequent Classroom Practice For Each 21 st Century Skill (Student Reporting)	58
Table 8: Least Frequent Classroom Practice For Each 21 st Century Skill (Student Reporting)	59
Table 9: Averages of Student and Teacher Scores of “Not Relevant” Practices By Skill Category	60
Table 10: Averages of Student and Teacher Scores of Skills Taught “Almost Daily”	61
Table 11: Averages of Student and Teacher Scores of Skills Taught “Almost Never”	62

List of Figures

Figure 1: The “Connecting Classroom, Campus and Community” Theme of Park

Tudor School 28

Background

Introduction: Why and How Education in K-12 Schools Is Being Redefined for the 21st Century

Scholars believe that change is happening today at an exponential rate (Kotter, 2011; Friedman, 2005). Technological and economic changes in particular are profoundly affecting how we live, how we work, how we play, how we function together, how we communicate, the jobs we do and how we do them, and how we define “community.” Striking is the abundance of technology in daily life and the ways technologies are transforming industries. This transformation is affecting opportunities available to individuals as well as the skills they need in order to take advantage of opportunities.

Harvard Economist Shoshana Zuboff predicted the next evolution of consumer capitalism that she called “distributed capitalism” (Zuboff & Maxmin, 2002). This type of capitalism is a shift away from a mass production approach defined by standardized products toward businesses that personalize goods and services for individual consumers, and often are driven by intelligent technologies. Evidence of distributed capitalism includes Starbucks (coffee any way you want it), Pandora (music selected for you based on prior listening habits), and iPhone apps (you can find one to serve every need).

A decade ago, in his prophetic book *The World Is Flat: A Brief History of the Twenty-First Century*, Thomas Friedman observed,

[A]round the year 2000 we entered a whole new era: Globalization 3.0. Globalization 3.0 is shrinking the world from a size small to a size tiny and

flattening the playing field at the same time... Globalization 1.0 was countries globalizing... Globalization 2.0 was companies globalizing, the dynamic force in Globalization 3.0 – the thing that gives it its unique character – is the newfound power for individuals to collaborate and compete globally. (2005, p. 10)

Both Zuboff's "distributed capitalism" and Friedman's "Globalization 3.0"

provide perspective on the expansive changes occurring in many industries, including education. Recent efforts to focus on global education and build collaboration into classrooms are examples that schools recognize students will be expected to communicate, collaborate, and compete in college and in their professions with people around the world. The "mass customization" approach that Zuboff recognized is evident in educational experiences offered outside of schools that have never before been available for students. For instance, the Global Online Academy (n.d.) provides a vast array of for-credit courses from which students can choose taught by faculty and alongside peers from other independent high schools around the world. Kahn Academy offers a "personalized learning dashboard" for self-paced learning and interactive lessons in math, science, computing, art and more (Khan Academy, n.d.).

Meanwhile, a growing body of research over the past ten years illuminates understanding about the brain, human motivation and learning. Influential works from an array of fields have shifted the way educators and school leaders are thinking about the purpose and practice of education. Among these works used for professional development or influencing approaches in schools are:

- Creation of Kahn Academy, the online learning site, by Salman Kahn in 2004

- *A Whole New Mind: Why Right-Brainers Will Rule the Future* by Daniel Pink, 2005
- *Mindset: The New Psychology of Success* by Carol Dweck, 2006
- “Do Schools Kill Creativity?” TED Talk, Sir Ken Robinson, 2006
- *Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns* by Clayton Christensen, Michael Horn and Curtis Johnson, 2008
- Adaption of the design thinking process for K-12 education at Stanford University’s Hasso Plattner Institute of Design (d.School) since 2008
- *The Global Achievement Gap: Why Even Our Best Schools Don’t Teach the New Survival Skills Our Children Need—and What We Can Do About It* by Tony Wagner, 2010
- “How to Build Your Creative Confidence” TED Talk, David Kelley, 2012
- *Creating Innovators: The Making of Young People Who Will Change the World* by Tony Wagner, 2012
- “What 60 Schools Can Tell Us About Teaching 21st Century Skills” TED Talk, Grant Lichtman, 2013
- *Independent School* magazine’s many issues (covering brain research, 21st century skills, experiential education, public purpose, and new assessments)

In light of this body of research and for the sake of remaining relevant and sustainable in a changing economy and educational landscape, heads of schools across the country, scholars, consultants and association leaders like presidents Patrick Bassett and John Chubb of the National Association of Independent Schools have called for K-12

schools to evolve. This evolution involves expanding the ways in which teaching and learning happen and connecting students authentically to their local and global communities (Robinson, 2006; Wagner, 2012; Bassett, 2002; Chubb, 2014).

These changes seriously affect the role of the teacher and the role of the student as the teacher-student relationship lies at the core of schools. Fundamental to the evolution discussed is a shift away from strictly teaching content toward developing specific skills that CEOs and leaders identify as sorely needed to be successful today. For the first time in human history, universal access to knowledge is quickly approaching. With wide ownership of personal computers, smart devices and open-access Internet, individuals and societies no longer need rely on a small number of adults – teachers – for interpreting and funneling knowledge. Only a generation ago, knowledge was accessed and gained through teachers who were trusted to be scholars of content that they identified, filtered and synthesized for students. With a smart device in hand, a student can now find the answer within minutes to a content-based question posed by a teacher (Wagner, 2012; Lichtman, 2014). Students also have instant access to primary source documents and juried research. Speaking to this shift, Patrick Bassett (2013), former president of the National Association of Independent Schools, wrote,

I believe that the third great transformational revolution in America — and, indeed, the world — is upon us, enabled by the Internet and the new technologies that open up limitless possibilities for how we live and work, and most important, how we teach and learn. This third revolutionary game-changer is made possible by the advent of the Internet, particularly by the democratized access to information and knowledge, and the ability of literally anyone to be a creator of information and knowledge.

(The Third Revolution section, para. 1)

Recent years have indeed brought an urgent, fertile dialogue as independent K-12 schools wrestle with how to respond to the rapidly changing world around them and the call to evolve. This exploration involves pressing questions: How will they adjust their curriculum and co-curricular programs to better prepare graduates to succeed in college and careers? As top students find college admission more competitive, what do colleges want today that is different than yesterday? What skills, knowledge, and aptitudes are considered essential and ideal by leading businesses and new industries? How do their school missions and strategic plans reflect these shifts? Moreover, looking for viability and long-term sustainability, how do schools create a compelling value proposition for families in an increasingly competitive educational market?

A growing number of schools have made fundamental philosophical, structural, programmatic, and, even, spatial design changes based on their answers to these questions. Examples of reimagined schools abound and they look and feel different than traditional 20th century schools designed to fuel an industrial age. The well-known renewal of Cleveland's under-enrolled Hawken School involved a recommitment to its roots in progressive education and reconnection with the inner city it had left for a suburban home (Looney, 2014). Hawken's journey has included the development of a radically different daily and annual schedule that incorporates time for three-week "intensive" interdisciplinary courses for high school students and time for elementary, middle and high school students to engage in service learning and experiential education across Cleveland (Mierke, 2013). In partnership with Stanford University's renowned Hasso Plattner Institute of Design (commonly known as the "d.School"),

Mount Vernon Presbyterian School in Atlanta deepens learning and real-world application for all students by teaching the “design thinking” approach to build students’ empathy and problem-solving mindsets (Mount Vernon Presbyterian School, n.d.). A significant number of the Edward E. Ford Foundation’s Leadership Grants and “projects of interest” are awarded to independent schools whose teachers or students partner with other institutions (often private and public schools or universities), or those with programs or centers that enable students to apply learning in real-world settings (Edward E. Ford Foundation, n.d. a, b, c, d).

Other schools have created “maker spaces” or “fab labs” like Castilleja School’s Bourn Idea Lab (Transformative Learning Technologies Lab, n.d.). Iolani School’s Sullivan Center for Innovation and Leadership and Collegiate School’s Sharp Academic Commons are examples of new designs that support collaboration and creativity with group spaces, writable walls, digital communications access, and wheeled desks, tables and chairs (Iolani School, n.d.; Redditte, 2013).

This reimagining of schools shifts teaching away from lecture and summative tests to formative testing and inquiry-based, student-centered pedagogical approaches designed to build skills valued in today’s innovation-hungry, diverse, connected, technological world. Research indicates that growth industries and business leaders are hiring for specific skills and mindsets rather than the ability to exhibit content knowledge (which can be learned) (National Association of Colleges and Employers, 2014; Wagner, 2012).

Though there is not a universal skills list or framework accepted across the education field, those developed by a few influential organizations and thought leaders are often cited and utilized. Among these are: “P21 Framework for 21st Century Learning” of the Partnership for 21st Century Learning (2015); Tony Wagner’s “Seven Survival Skills”(Wagner, n.d.); NAIS’ “Essential Capacities For The 21st Century” (2010); and the “21st Century Competencies” of the Asia Society (Soland, Hamilton & Stecher, 2014). For an idea of the types of valued skills on the rise in schools, the “Seven Survival Skills” developed by Tony Wagner (Harvard University’s first Innovation Fellow) are: 1) Critical thinking and problem solving; 2) Collaboration across networks and leading by influence; 3) Agility and adaptability; 4) Initiative and entrepreneurship; 5) Effective oral and written communication; 6) Accessing and analyzing information; and 7) Curiosity and imagination (Wagner, n.d.). As an infrastructure organization for the field, the National Association of Independent Schools convened the NAIS Commission on Accreditation (2010) that conducted an extensive exploration of literature and models in the field to develop its list of seven “Essential Capacities for the 21st Century” and numerous indicators of each capacity (see Appendix A).

Traditionally, discipline-based high school courses in History, Economics and other subject areas have been highly defined by the content they sought students to acquire. Naturally, classic skills like critical thinking and written and oral communication have long been objectives of Liberal Arts courses. Still, with the focus on 21st century skills comes a re-dedication to these particular skills, and the addition of more innovation- and design-oriented capacities like entrepreneurship and creativity.

Interestingly, while the conversation about 21st century education has been prominent, several areas once on the periphery or in the extra- and co-curricular areas of school life have been another strategic focus for schools. Among these areas are service learning, experiential education, global education, and broader categories like “civic engagement” or “public purpose” under which numerous activities with a public good-orientation fall. In fact, the term “public purpose” has been more broadly adopted or understood by heads of independent schools and associations as an umbrella for such diverse public good-focused activities as service learning, environmental sustainability, tutoring programs that assist public school students, free use of school facilities by community organizations, and leadership education.

The first survey on public purpose in schools across the U.S. was conducted by the National Association of Independent Schools and found that “some type of public purpose program exists in virtually all independent schools” (Torres, 2013, p. 6). Still, the types and quantity of opportunities available to students and the allocations of resources and staffing for public good oriented activities vary greatly from school to school. More on this topic follows in the section, “A Focus on Public Purpose and Public Good in Independent Schools.”

Twenty-first century teaching and learning approaches and public good activities both seem to be on the rise. What remains to be seen is whether and how schools will intentionally connect the objectives and impact they seek in these two areas. There are examples of an alignment of the two in some recent school strategic visions and strategic plans. For example, the country’s oldest Quaker school, William Penn Charter

School of Philadelphia formed two new centers – a Center For Public Purpose and a Teaching and Learning Center – in 2012 to support its new vision, “Educating Students to Live Lives That Make A Difference.” The vision document states, “Penn Charter can do more than prepare students to thrive in the 21st century. We can prepare our graduates to make a difference” (William Penn Charter School, 2012, p. 2). The Center for Public Purpose supports the school’s efforts in community engagement, service learning, social responsibility, justice, and issue areas like food scarcity and educational equity (William Penn Charter School, n.d.).

“Strategic Plan 2012: For College and For Life” of the Westminster Schools (a pre-kindergarten through twelfth grade school in Atlanta) includes a vision statement called “Learning For Life” that begins, “At Westminster, we grow as lifelong learners who serve and lead in a changing world” (The Westminster Schools, 2012, p. 6). This vision goes on to define how the school will achieve “learning for life” in students by developing essential skills (including problem-finding and problem-solving, creating and innovating, and serving and leading) and promoting essential actions (like “content and relationships that connect us to the larger world and the world to us”) (The Westminster Schools, 2012, p. 6). Schools with a long history of charity-oriented community service, like Penn Charter and Westminster, are evolving to offer more courses and programs designed to include both a public benefit orientation (embodied by their visions) and the development of skills and worldviews that will help their students thrive and contribute in today’s changing, global landscape.

With nationally known schools creating intentional connections like these and with a greater number of schools developing either or both public good programming and 21st century teaching and learning, a natural question arises: Is it possible that schools could find greater success in each area and leverage better outcomes if they sought to intentionally foster 21st century skills by investing in existing and new courses with a public good orientation?

Purpose of the Study

Independent high schools have many public good oriented activities that are extra or co-curricular experiences for their students. Yet, some schools also offer electives or core curricular courses that involve students in (a) exploring social issues, (b) the work of community organizations, and (c) themes related to the common good (such as interdependence, equity and community). Given the educational shifts happening among a growing number of schools, this is an ideal time to assess these courses as potential vehicles to which the school can attach 21st century educational objectives and coordinate for similar outcomes.

This study intends to explore whether courses that have a public good-orientation promote the development of much desired 21st century skills in high school students in independent schools. *Public good oriented courses* are defined as those that involve nonprofit education, youth grantmaking or learning about and addressing community needs. To seek an answer to this question, this study gathered self-reported observations of specific practices connected to 21st century skill development by

students (and their teachers) involved in these courses. The survey instrument used in this study also highlighted one type of public good course – those that utilize the service learning method, as this teaching approach is distinguishable from others and is widely recognized as a way to connect students and the curriculum to real world issues and community partners.

This research began with a suspicion that students would observe that courses of this type foster both those skills that have long been a focus of education (and which appear on 21st century skills lists, such as communication and critical thinking skills) *and* those skills coveted today (such as, creativity, innovation, global perspectives and use of technology). Additionally, there was a supposition that students would report that the courses achieved these goals to varying degrees, depending on the particular skill and the focus on those skills within a given class as reported by the teacher.

The question of whether courses that have a public good-orientation promote the development of 21st century skills in high school students bridges the fields of education and philanthropy. A philanthropic studies training at Indiana University instills an interdisciplinary perspective in its students, epitomized by Robert L. Payton's synergistic vision of the discipline. Of this he wrote, "The study and teaching of philanthropy can be used to illuminate other fields, just as these other fields can be used to illuminate our understanding of philanthropy" (1988, p. 7). It is not only educational pedagogy and objectives that are of interest to a philanthropic studies student, but also the civic engagement and communal responsibility nurturance that can happen through school-based education. Thusly, deeper understanding of

education can inform perspectives on philanthropic development while philanthropic understanding can inform perspectives on education. This study's driving question is an example of this interdisciplinary perspective, seeking to understand more about both high school education and philanthropy education in independent schools.

Research Questions

A number of questions drove research around areas covered in this paper to develop a background understanding, explore past research, and determine an approach to answer the central research question for this study – do courses that have a public good-orientation promote the development of 21st century skills in high school students in independent schools? The questions guiding research were:

- What are recent trends in education and what have popular educational thought leaders / consultants been recommending for schools?
- What are “21st century skills”?
- What are benefits to high school students from participation in courses that incorporate nonprofit education, youth grantmaking, exploring and addressing community issues, and service learning?
- What kinds of programs and support do independent schools that have significant investments in public purpose look like?
- What do schools invested in public purpose report are the 21st century skills fostered by their students' participation in public good-oriented courses?

Definition of Terms

21st century skills: The term “21st century skills” is a staple of educational publications and professional development circles today and its popularity evidenced by the 81 million entries that arise from a Google search of the term. Yet, there is not a singular definition or list of skills widely accepted in the K-12 field. A good general definition is:

[A] broad set of knowledge, skills, work habits, and character traits that are believed—by educators, school reformers, college professors, employers, and others—to be critically important to success in today’s world, particularly in collegiate programs and contemporary careers and workplaces.

(Great Schools Partnership, 2015)

As mentioned, many lists of skills exist among associations, nonprofit groups, educational reformers and thought leaders. The 21st century skills that are the focus of this study, and their corresponding definitions, follow and are borrowed from Hixson, Ravitz and Whisman (2012). They are:

1. Critical thinking skills: The ability to analyze complex problems, investigate questions for which there are no clear-cut answers, evaluate different points of view or sources of information, and draw appropriate conclusions based on evidence and reasoning.
2. Collaboration skills: The ability to work together to solve problems or answer questions, to work effectively and respectfully in teams to accomplish a common goal and to assume shared responsibility for completing a task.
3. Communication skills: The ability to organize thoughts, data and findings and share these effectively through a variety of media, as well as orally and in writing.

4. Creativity and innovation skills: The ability to generate and refine solutions to complex problems or tasks based on synthesis, analysis and then combining or presenting what one has learned in new and original ways.
5. Self-direction skills: The ability to take responsibility for learning by identifying topics to pursue and processes for one's own learning, and being able to review one's work and respond to feedback.
6. Global connections: The ability to understand global, geo-political issues including awareness of geography, culture, language, history, and literature from other countries.
7. Local connections: The ability to apply what one has learned to local contexts and community issues.
8. Using technology as a tool for learning: The ability to manage one's learning and produce products using appropriate information and communication technologies.

Independent schools: Often called "private" schools, independent schools are usually nonprofit schools that focus on both academics and broader character development (such as leadership, responsibility, or citizenship). These schools can encompass the span of preschool through 12th grade or contain one or a combination of an elementary, middle and / or high school. Independent schools are defined by a set of characteristics, including:

- Independently governed by a board of trustees, as opposed to a public school board.

- Coeducational or single-sex.
 - Day schools, boarding schools, or combination day and boarding schools.
 - Supported by a combination of tuition payments, charitable contributions, and endowment revenue — not public funds.
- (National Association of Independent Schools, 2012)

Public good: Though “public good” is often used as an economic term and seen as a commodity or service, it is used differently in philanthropic studies. Robert Payton’s definition of philanthropy is “voluntary action for the public good.” For the purpose of this paper public good is defined as “the benefit or well-being of the public” (Oxford Dictionaries).

Public purpose: There is not one definition used across the field and public purpose means different things in different schools. To some, public purpose is synonymous with partnerships between independent schools and public schools or summer and academic year enrichment programs for underserved public school students. For others, public purpose is about fostering a civic engagement commitment in their students with community service and service learning opportunities that engage students in contributing to important issues and provide them with real world experiences. The benchmarking study, 2013 NAIS Study on Public Purpose at Independent Schools, contains an expansive list of types of public benefit-oriented activities under the public purpose umbrella (Torres, 2013). Cumulatively, these activities lead us to define public purpose as “the many ways a school harnesses its resources, curriculum, programming

and advocacy to do good for the local and global communities” and to nurture this value and action in its students (Nissan, 2013, p. 2).

Service learning: Distinct from community service that happens outside the school’s academic life, service learning brings curricular content alive as students apply what they learn and connect experientially to their community. Service learning is defined as a "course-based, credit bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs, and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline and an enhanced sense of personal values and civic responsibility" (Bringle & Hatcher, 2009, p. 38).

Literature Review

A Focus on Public Good and Public Purpose in Independent Schools

Narratives of the American history of service, civic responsibility and action that serves the public good certainly exist (Bremner, 1960; Marty, 1997; Burlingame, 2004). Less has been written about the general history of youth involvement in philanthropic activities. Youth groups and schools were certainly primary venues for the building of youth character from their earliest formation (Falk & Nissan, 2007). For example, Boy Scout troops and schools planted and cared for “victory gardens” during World War II to prevent food shortages (Nissan, 2007).

Indeed, development of students’ character has a long and intertwined history in K-12 schools with efforts to nurture students’ values, knowledge and skills for contributing to their community. In fact, “in 1918, the National Education Association’s Commission on the Reorganization of Secondary Education identified ‘ethical character’ and ‘citizenship’ among what came to be known as the seven cardinal principles of education” (Saks, 1996, p. 1). Many distinctive efforts and “movements” encompass this journey. The 1960s through 1990s brought a groundswell of efforts through values education, moral education, character education, leadership education, civic education, community service and volunteerism, service learning, and philanthropy education.

Looking at K-12 independent schools since the early 2000s, there has been the introduction of, or growing interest in, social and emotional learning, empathy development, civic engagement, social responsibility, environmental sustainability, social entrepreneurship, and an array of formal pedagogies focused on helping students

learn to problem solve and develop solutions. This interest is evidenced by school-based and national professional development themes, development of new school programs (like student “eco” clubs), incorporation of new pedagogies (like project-based learning and design thinking), and new administrative positions in support of these topics (such as directors of social-emotional learning or civic engagement).

The purpose of formal education is at the heart of these efforts – for schools to fulfill their role of nurturing whole students and engaging students toward being good members of their community and toward positive contribution. Education reformer John Dewey (1916) wrote of the aims of education being to prepare young people academically with skills and dispositions (like critical thinking) for individual growth that also prepares them to be contributors to a democracy. Certainly, the work of scholars like Harry Boyte (citizen politics and democracy) and Peter Levine (civic learning and civic engagement) has highlighted the roles of schools in preparing young people to be engaged, informed citizens.

Yet, the varied efforts across the past fifty years speak to a broader issue for independent schools beyond the role or results they seek for their students. In 2000, in an *Independent School* magazine article, Lick-Wilmerding High School’s Headmaster Albert Adams articulated the value and need for independent schools to commit to a public purpose. He said, “It is my fervent hope that school heads and trustees across the country will embrace public purpose as integral rather than peripheral to their missions and will step forward as dynamic leaders in making each of their schools a brilliant public purpose ‘point of light’” (2000, p. 18). Adams’ call addresses the public purpose

role of the school as an institution within its community and the actions of its head of school through activities like board service for local organizations or agencies, use of school facilities by community organizations, and creation of public good oriented programs. In other words, Adams advocates that independent schools should serve others beyond the students in their care, a philosophy validated by a number of vocal school leaders. Barbara Chase, former Head of School at Phillips Academy, shared,

Most of our schools provide opportunities for community service and service learning for our students and our faculty. These programs are valuable and send a strong message about individual responsibility to the world. I do believe, however, that when the institution itself sets out to answer a critical need by providing public-purpose programs, it sends an equally strong and necessarily complementary message. The work is up to each of us individually; it is also up to our schools, as part of the fabric of society.

(2011, last para.)

The perspectives of Adams and Chase reflect the same “renewed emphasis on the public purposes of higher education” that has occurred at the collegiate level, with varying degrees across institutions (Hatcher, 2011, p. 81).¹

Interestingly, *Education Week’s* “Independent Schools, Common Perspectives” columnist, Peter Gow (2013) directly addressed the public good obligation for schools that benefit from non-tax status when he wrote,

But in order to realize this [public] purpose, schools need to be conscious of it--and of the duties that I believe our legal privileges lay upon us. We must be clear in our missions and values and clear in the ways in which we represent worthy choices (and not just comfortable opt-outs) for families and children; it's not enough just to educate our students--we need to add real value, cultural and even moral value, to society. This is a

¹ Rickards (2015) studies 21st century skill acquisition in a Drexel University community-based learning course. In this example of “democratic engagement,” Drexel students and disenfranchised members of the local neighborhood learn alongside one another.

tall order, and not all of our constituents may fully understand it. But it's what we must do.

Gow's remarks reflected a conversation that school leaders had been having in private for years, possibly due to the questioning of private schools' charitable status in the U.K.

In 2006, the national initiative Private Schools with Public Purpose (PSPP) was founded after a meeting of program leaders from several West Coast and Hawaiian schools at the George Lucas Educational Foundation (Ackerman, 2010). PSPP holds annual conferences at different schools around the U.S. each year and has been an advocate for partnerships with local public and charter schools and nonprofit organizations, particularly those focused on educational equity and access.

Significant resources arose across the field about the topic of public purpose. The National Association of Independent Schools, the field's primary infrastructure organization, published issues of its quarterly *Independent School* magazine focused on public purpose topics: "Connecting Learning with Sustainable Living" (Spring 2005); "What We Teach: Part 1, Smart & Good Schools" (Winter 2007); "Education and Democracy, Today" (Spring 2008); "Schools and the Common Good" (Spring 2011); and, "Redefining the Good Life, Redefining Education" (Spring 2012). NAIS also devoted its annual 2011 conference to the theme "Monumental Opportunities: Advancing Our Public Purpose." Two years later the National Network for Schools in Partnership was formed to provide "implementation support" for members (public, charter and private schools and partners) interested in collaboration and in advancing educational equity (National Network for Schools in Partnership, n.d.).

Then, in 2013, NAIS' Director of Research Amada Torres conducted the first benchmarking study on this topic, 2013 NAIS Study on Public Purpose at Independent Schools, looking at the variety of public purpose commitments and extent to which they permeate schools.² Following is the study's list of many types of public purpose activities:

1. Work on green projects
 2. Work with social service organizations
 3. Service learning
 4. Nonprofit organization partnerships/collaboration
 5. Summer programs for students of other schools
 6. Networks with faculty and/or staff of other schools
 7. Tutoring and/or mentoring relationships with students from other schools
 8. Work on sustainable projects
 9. Student exchange programs with other schools
 10. Professional development and/or training for teachers from other schools
 11. Professional development and/or training for adults
 12. Professional development and/or training for administrators from other schools
 13. Partnership/collaboration with other schools to teach core programs
 14. Partnership/collaboration with other schools to teach enrichment programs
 15. Remedial classes for students at other schools
 16. Teaching and/or learning centers for students from other schools
- (Torres, 2013, p. 7)

Key findings were that (a) virtually all schools reported having one or more public purpose activity and (b) two particular activities were the leaders – 95% of schools reported participating in green projects (“such as recycling, waste reduction, composting, green roof, gardening, ecological restoration”) and 93% shared they did

² The study is based on responses received from 402 of 1008 schools sent the survey.

“social service work with organizations like retirement centers, food banks, and other social service programs” (Torres, 2013, p. 6).

Findings also showed that school size and region influenced a number of factors. For instance, larger schools (of 700+ students) offered more types of public purpose programs (Torres, 2013, p. 8). Nearly half of the respondents reported working with a public school partner on an initiative – also a factor that was higher for larger schools (Torres, 2013, p. 10). One regional difference was “sustainable projects (such as energy conservation, energy generation, water conservation, alternative transportation)” with nearly three-quarters of Western schools reporting these types of programs compared to only half of schools in the Midwest (Torres, 2013, p. 8).

Several findings from the NAIS report seem particularly interesting and related to this study of 21st century skills and public good courses. Of all grade levels / school divisions, participation in public purpose is highest in the high school (79%) versus middle (76%) and lower (55%) schools (Torres, 2013, p. 23). Of the schools surveyed, 75% reported that they have some form of service learning (local, national and/or international) (Torres, 2013, p. 7), with large schools at 93% (Torres, 2013, p. 8). Which of the activities relate to course-based curriculum is not evident. Yet, the study data tells us that more than 48% of public purpose activities are developed and run by a teacher (Torres, 2013, p. 19). Also, 53% of the schools reported that they were “extremely” or “very successful” in integrating public purpose into their curricula, with high schools reporting 40% in these categories and 52% rating their integration as only “somewhat successful” (Torres, 2013, pp. 23-25).

Finally, Torres reported, “Six-in-ten schools incorporate public purpose in their schools’ missions and priorities to either a very great extent (26 percent) or to a great extent (34 percent). Survey participants from large schools (with 700 or more students) are more likely to agree that public purpose is reflected in their schools’ missions (73 percent)” (2013, p. 11).

Interestingly, Table 1 shows mission statements of the founding schools of the aforementioned Private Schools with Public Purpose (PSPP). Each mission contains wording that speaks to the school’s commitment to develop in students a sense of contribution and responsibility: “encourage constructive and responsible global citizenship” (Head-Royce School, n.d.); “contribute wisdom, compassion, and leadership to a global society” (Lakeside School, n.d.); “contribute to the world” (Lick-Wilmerding High School, n.d.); and “develop social responsibility” (Punahou School, n.d.a).

Another significant study, “Understanding Philanthropy Education in K-12 Schools: A Typology” was conducted at the Lilly Family School of Philanthropy and involved 128 NAIS member schools in an online survey (Lilly Family School, 2014, p. 18). This study utilized a narrower framework of “philanthropy education” encompassing different and fewer activity “types” than the NAIS benchmarking public purpose study.³ The study’s types of core philanthropy education were: (a) community service; (b) youth fundraising; (c) service clubs; (d) service learning projects; (e) civic engagement;

³ The basic definition of “philanthropy education courses” in this study is “courses focusing on ‘philanthropy’s history, culture and values’ as well as ‘the social, cultural political, and economic roles philanthropy has played through history’” (Lilly Family School, 2014, p. 12).

Table 1:**Mission Statements Of Founding Schools Of Private Schools With Public Purpose**

1. Head Royce School's Mission: To inspire in our students a lifelong love of learning and pursuit of academic excellence, to promote understanding of and respect for the diversity that makes our society strong, and to encourage constructive and responsible, global citizenship (Head-Royce School, n.d.).
2. Lakeside School's Mission: To develop in intellectually capable young people the creative minds, healthy bodies, and ethical spirits needed to contribute wisdom, compassion, and leadership to a global society. We provide a rigorous and dynamic academic program through which effective educators lead students to take responsibility for learning. We are committed to sustaining a school in which individuals representing diverse cultures and experiences instruct one another in the meaning and value of community and in the joy and importance of lifelong learning (Lakeside School, n.d.).
3. Lick-Wilmerding High School's Mission: A private school with public purpose, Lick-Wilmerding High School develops the head, heart, and hands of highly motivated students from all walks of life, inspiring them to become lifelong learners who contribute to the world with confidence and compassion (Lick-Wilmerding High School, n.d.).
4. Punahou School's Mission: To provide an environment where students can:
 - Develop moral and spiritual values consistent with the Christian principles on which Punahou was founded, affirming the worth and dignity of each individual.
 - Develop intellectual, academic and physical potential to the fullest degree, preparing them for college and for challenges facing them now and in the future.
 - Develop and enhance creativity and appreciation of the arts.
 - Appreciate cultural diversity and develop social responsibility (Punahou School, n.d.a).

(f) youth grantmaking; and (g) philanthropy education courses (Lilly Family School, 2014, p. 38).

The activity offered the most was community service at 98% with 70% of respondents identifying their activities as “extra-curricular” (falling outside the regular curriculum or classroom) (Lilly Family School, 2014, p. 5). Twenty percent of surveyed

schools reported offering a philanthropy education course at some point though only 71% of these schools reported that the course was offered as a curricular or co-curricular experience (Lilly Family School, 2014, p. 6). Meanwhile, of eight schools that reported they did not offer such a course, five “reported that philanthropy-related topics and issues were discussed in other classes” (Lilly Family School, 2014, p. 20). Service learning participation reported in this study was 72% (Lilly Family School, 2014, p. 6), closely aligning with Torres’ finding that 75% of schools offer service learning activities (2013, p. 7).

Scanning the websites of independent schools, it becomes apparent that many have directors or coordinators dedicated to public purpose areas like service learning. The NAIS benchmarking study reported that 71% of programs are “centralized through specific staff”; this number is highest in larger schools (83%) but no less than 58% in schools of other sizes (Torres, 2013, p. 20). An example of a public purpose team is found at the Blake School in Minneapolis. With its 1850 students and three campuses, a PK-12 Director of Service Learning works with Service Advisors who are also teachers in its two lower school campuses and middle school and a half-time upper school coordinator that guide and support service learning so that it is “woven into Blake's curriculum through community involvement projects, and academic coursework [that] addresses community issues at every level” (Blake School, n.d.).

Some schools have “centers” that provide a place for students and faculty to access or engage with staff, organized activities and training like the Luke Center for Public Service at Punahou School. The Luke Center is a physical home (a centrally-

located building) for programming and training in social entrepreneurship, sustainability and service learning and where its Luke Leaders (middle and high school students) design and engage in service and service learning) (Punahou School, n.d.b). The Glenn Institute for Philanthropy and Service Learning at the Westminster Schools provides support, resources and education in service learning and community service, as well as offering students classes in philanthropy and nonprofit education in the elementary school, junior high and high school (The Westminster Schools, n.d.).

Many schools have augmented traditional community service activities like canned food drives and serving food in local shelters with service learning and other experiential pedagogies with classroom curricular objectives. Knowledge and practice of these pedagogies are encouraged both through professional development opportunities and funds from the school and encouragement from administration when faculty members individually choose to incorporate them into their teaching. A proliferation of recently created courses, projects and programs incorporate project based learning, design thinking and other teaching pedagogies that engage students in understanding an issue deeply and looking for innovative solutions in conversation with local community members. For instance, in Envision Richmond, an 8th grade capstone experience created in 2013 at Collegiate School,

Students leave the traditional classroom and travel to assigned sites around Central Virginia where they explore and analyze specific issues related to – in addition to the military – homelessness, medical care, mental health, literacy, foster care, immigration, and the plight of individuals with disabilities. Then, they work in small groups to develop solutions to the problems they identify.

(Bradshaw, 2015)

Studying public good approaches across independent schools, it becomes apparent that, for some schools the concept of public purpose is a way to crystallize a commitment to community partnerships and service, while for other schools public good and social responsibility offer an opportunity to develop a strategic umbrella under which it can reaffirm and focus many program areas that have varying degrees of public benefit. For the latter group, they are pulling in and aligning previously separate efforts under one framework or umbrella. The expanse of the umbrella varies by school and the number of areas they pull together. A few schools have newly-created fascinating models to watch. Collegiate School has two large aims for its students – scholarship and responsible citizenship. The school’s all-encompassing “Responsible Citizenship” initiative contains eight pillars: Global Engagement, Inclusion, Economic Literacy, Entrepreneurship, Sustainability, Ethics, Civic Engagement, and Service Learning with one initiative director and many subcommittees working to move forward goals and faculty support in each area (Collegiate School, n.d.).

Another school with a recently created framework places connection to community as central to students’ educational journey. The overarching school-wide theme created by Park Tudor School in Indianapolis is “Connecting Classroom, Campus and Community,” an engine to achieving its strategic plan, PT2020. As Figure 1 shows, this theme articulates that broader connections to local and global communities can be made in each of the six areas of the school experience – Community Engaged Learning, Global Opportunities, Sustainability, Character and Values, Academic Excellence and Innovation, and Identity and Diversity (Park Tudor School, 2015, September 24). The



Figure 1: The “Connecting Classroom, Campus and Community” theme of Park Tudor School

Community Engaged Learning program encompasses the typical public purpose activities of service learning and community service, as well as “community-based educational experiences” like internships in nonprofits and projects conducted in collaboration with university researchers. Interestingly, by uniting this approach with its strategic plan Park Tudor has made an overt connection between public purpose work and the development of 21st century skills. One such example is its Innovators Institute, a summer experience in which high school students from across the city learn design thinking and apply it to a social issue.⁴ In 2015, the focus was the “issue of milkweed

⁴ Design thinking is a structured method of generating and developing ideas that meet user needs. The stages of this popular method usually encompass: empathize, define, ideate, prototype and test.

planting to help save migratory monarch butterflies, an issue that the Park Tudor community first began exploring [during the] last school year” (Park Tudor School, 2015, July 21).

Background on Service Learning and Civic-Mindedness in Schools

Searching for literature about the outcomes of service learning quickly brings to the forefront the historical backdrop of youth service and volunteerism in the U.S. to which service learning’s growth in schools has been anchored. The national governmental and nonprofit landscapes of the past 50 years experienced the creation of numerous pieces of legislation, agencies and nonprofit organizations that would fund, train, advocate and provide resources and expertise toward organizing and expanding youth service and civic action. With significant events, a cultural value for service took hold nationally evidenced by varied avenues for volunteer and civic engagement by youth.

President John F. Kennedy’s historic call to service was realized by his creation of the Peace Corps in 1961 – a large-scale opportunity for national service that was non-military and humanitarian; in its first five years more than 14,500 enlisted (Peace Corps, n.d.). College campuses of the 1960s and 70s served as a recruiting arena and protest grounds for the Student Nonviolent Coordinating Committee of the Civil Rights Movement and Vietnam War protestors. Perry and Imperial share, “The passage of the National and Community Service Act of 1990 marked the beginning of an expansion of citizen service as a problem-solving instrument in American society” (2001, p. 462); it

created the Commission on National and Community Service. With the National and Community Service Trust Act of 1993, the Commission merged with another agency to become the Corporation for National and Community Service, focused on promoting service in Americans of all ages. The AmeriCorps program began, and now engages more than 75,000 Americans annually (many are college age) to help in both topical and geographic area of vital need (such as in public schools) while earning participants an education award toward college costs (Corporation for National and Community Service, 2011).

This national backdrop affected a new emphasis on service in K-12 schools. Spring, Grimm and Dietz explain that surveys of K-12 public schools reported that 68% of students participated in community service activities in 2008, a growth from 64% in 1999 (2008, p. 2). A look at only high schools showed 83% of high schools arranged service activities and recognized student service in 1999, and, in 2008, this number rose by 3% (Spring, Grimm and Dietz, 2008, p. 5).

The Corporation's Learn and Serve America program was created in 1993 and promoted the growth of service learning⁵ in schools across the U.S. by means of grants and technical assistance through 2011; it also provided a national resource clearinghouse on service learning for K-12 schools, colleges and universities (Corporation for National and Community Service, 2011). Another influential vehicle for the adoption of service learning in K-12 schools was the founding of the National Youth Leadership Council by Jim Kielsmeier. NYLC has contributed for more than 25 years of

⁵ Histories of service learning illustrate examples used across time, though this paper focuses on the beginning of the formal field in American educational institutions.

National Service Learning Conferences that have boasted up to 2000 participants (teachers, student leaders, administrators and researchers).

In 2008, culminating more than a decade of work, the K-12 Service Learning Standards for Quality Practice (see Table 2) was released with approval by leading organizations and researchers (Weah, 2007). Based on research, the standards offer guidance for the development of effective service learning in the classroom. In these ways, the K-12 service learning field arose and grew through the establishment of infrastructure organizations for practice and research; national and regional conferences; federal grant programs; standards; researchers (like Shelley Billig of RMC Corporation); school district- and state-based trainers; national trainer-consultants (notably, James Toole and Cathryn Berger Kaye); the first comprehensive guidebook for K-12 educators (*The Complete Guide to Service Learning*, Kaye, 2010); and a growing body of research in the field focused on assessment and practice in K-16 schools.⁶ This wealth of resources influenced the adoption of service learning in K-12 schools.

The research on service learning most relevant to this study are findings about students' skills or competencies that would be considered a focus of 21st century education – including outcomes related to a sense of social or civic responsibility, understanding about community issues, and teamwork. The rich body of service learning research focused on higher education (i.e., evaluation, college students,

⁶ Indicators of the maturity of research around service learning include the International Association for Research on Service-Learning and Community Engagement, the Association's annual Conference, and a wealth of publications including the *Advances in Service Learning Research* series that covers K-12 education, teacher education and university education.

Table 2:**K-12 Service-Learning Standards for Quality Practice****Meaningful Service**

Service-learning actively engages participants in meaningful and personally relevant service activities.

Reflection

Service-learning incorporates multiple challenging reflection activities that are ongoing and that prompt deep thinking and analysis about oneself and one's relationship to society.

Youth Voice

Service-learning provides youth with a strong voice in planning, implementing, and evaluating service-learning experiences with guidance from adults.

Progress Monitoring

Service-learning engages participants in an ongoing process to assess the quality of implementation and progress toward meeting specified goals, and uses results for improvement and sustainability.

Link to Curriculum

Service-learning is intentionally used as an instructional strategy to meet learning goals and/or content standards.

Diversity

Service learning promotes understanding of diversity and mutual respect among all participants.

Partnerships

Service-learning partnerships are collaborative, mutually beneficial, and address community needs.

Duration and Intensity

Service-learning has sufficient duration and intensity to address community needs and meet specified outcomes.

Source: National Youth Leadership Council (2008). K-12 Service Learning Standards for Quality Practice. Minneapolis, MN: National Youth Leadership Council.

courses and programs) is far more extensive than that looking at K-12 topics.

Eyler, Giles, Stenson and Gray (2001) reviewed and categorized research studies and dissertations about collegiate service learning for a large study funded by the Corporation for National and Community Service. Several outcomes listed in their designated categories of Personal, Social and Learning Outcomes reflect similar goals of 21st century education. They summarized that service learning:

- “Has a positive effect on interpersonal development and the ability to work well with others, leadership and communication skills” (Personal);
- “Reduces stereotypes and facilitates racial and cultural understanding” (Social);
- “Has a positive effect on sense of social responsibility and citizenship skills” (Social);
- “Has a positive effect on commitment to service” (Social);
- “Has a positive impact on students’ academic learning” (Learning);
- “Improves students’ ability to apply what they have learned ‘in the real-world’” (Learning); and,
- “Impact on such academic outcomes as demonstrated complexity of understanding, problem analysis, critical thinking, and cognitive development” (Personal).

(Eyler et. al, 2001, pp. 1-4)

A significant amount of scholarly work over the past two decades have explored civic learning, civic knowledge, civic skills, and civic engagement; some research has addressed their relationship with service learning (Hatcher, 2011; Kahne & Sporte, 2008; Levine, 2007; Scales, Roehlkepartain, Neal, Kielsemeier & Benson, 2006; Billig, Root & Jesse, 2005; Billig, 2004; Billig, n.d.) and distinguished scholars have provided insight and work contributing to the development of both fields.⁷ In fact, “The Civic Mission of

⁷ In fact, service learning was designated a competency in the “Core Competencies in Civic Engagement” for academic programs, created by the Center for Engaged Democracy Core Competencies Committee convened by Merrimack College (Brammer et al., 2012).

Schools” report was developed through a series of meetings in 2002 gathering nearly 60 of the country’s leading scholars and practitioners from many disciplines and backgrounds to create one common vision and statement about civic education in K-12 schools (Gibson & Levine, 2003).

Table 3 shows the “Goals of Civic Education” of the report; these goals clearly overlap with objectives of service learning. Yet, concerns over young Americans’ decreased interest in public service and political life inspired these efforts at increasing politically oriented youth civic engagement and the role of schools in helping youth acquire “the skills, knowledge, and attitudes that will prepare them to be competent

Table 3:

Goals Of Civic Education

Civic education should help young people acquire and learn to use the skills, knowledge, and attitudes that will prepare them to be competent and responsible citizens throughout their lives. Competent and responsible citizens:

1. Are informed and thoughtful; have a grasp and an appreciation of history and the fundamental processes of American democracy; have an understanding and awareness of public and community issues; and have the ability to obtain information, think critically, and enter into dialogue among others with different perspectives.
2. Participate in their communities through membership in or contributions to organizations working to address an array of cultural, social, political, and religious interests and beliefs.
3. Act politically by having the skills, knowledge, and commitment needed to accomplish public purposes, such as group problem solving, public speaking, petitioning and protesting, and voting.
4. Have moral and civic virtues such as concern for the rights and welfare of others, social responsibility, tolerance and respect, and belief in the capacity to make a difference.

Source: Gibson, C. & Levine, P. (Eds.) (2003). The Civic Mission of Schools. A Report from Carnegie Corporation of New York and CIRCLE: The Center for Information and Research on Civic Learning and Engagement. New York: Carnegie Corporation and CIRCLE. P. 4.

and responsible citizens throughout their lives” (Gibson & Levine, 2003, p. 4).

Certainly, some of the documented benefits of service learning at the high school level are related to civic-mindedness as defined by Bringle and Steinberg: “Civic-mindedness is a person’s inclination or disposition to be knowledgeable of and involved in the community, and to commit to act on a sense of responsibility as a member of that community” (Bringle & Steinberg, 2010 in Hatcher, 2011, p. 88). This study is interested in this broader sense of civic-mindedness. Among service learning’s benefits are increased knowledge about community issues, a sense of social responsibility, skill development (such as how to implement a service project), and feelings of self-efficacy (Westheimer & Kahne, 2000; Youniss, McLellan, & Yates, 1997). Billig, Root and Jesse, in a study of over 1000 high school students participating in service learning, wrote:

Students who reported stronger engagement in service-learning were statistically significantly more likely to be academically engaged, value schooling, become attached to school and community, enjoy content courses, perceive a gain in civic knowledge, skills, and dispositions, become more civically engaged in general, and felt greater efficacy.
(2005, pp. 53-54)

In a study of more than 4000 Chicago high school students utilizing a model with predictive variables, Kahne and Sporte observed, “The impact of civic learning opportunities and of experiencing service learning was both sizable and substantially larger than any other measure in our study including students’ prior commitments to civic participation” (2008, p. 753).

Increased academic achievement has been linked to service learning in numerous studies of high school adolescents in public schools (Dávila & Mora, 2007;

Scales, et.al, 2006; Furco, 2002). Dávila and Mora found a statistically significant increase of academic progress for students (particularly boys) in a high school history course and in reading in courses where community service was performed to meet course requirements (2007, p. 1). Scales and colleagues (2006) reported a distinction in this relationship: “principals of urban, high-poverty, or majority nonwhite schools are significantly more likely than other principals to judge service-learning's impact on attendance, school engagement, and academic achievement to be ‘very positive’” (p. 48). Baumann found a statistically significant improvement only in reading proficiency, particularly those with the lowest reading scores (2014, pp. 4-5). These findings around service learning having particularly positive affects on academic engagement in at-risk students could lend support for its use in independent schools to better serve students from these populations that may struggle with the typical academic rigor.

Notably, studies affirm that quality of service learning experiences affect the results (Baumann, 2014; Billig, Root & Jesse, 2005; Melchoir, Frees, LaCava, et.al, 1999). Billig, Root and Jesse found that “service-learning is effective when it is implemented well, but it is no more effective than conventional social studies classes when the conditions are not optimal” (2005, p. 1). In fact, the researchers explain “that the use of active teaching techniques was most beneficial for student outcomes, and service-learning conferred a small additional benefit over other active pedagogies” (Billig, Root & Jesse, 2005, p. 1). This may be a significant finding related to study of classroom practices that support development of 21st century skills since service learning first came into popularity in the 1990s, when this experiential, student-centered approach

was more unique for students than today as teachers begin to utilize a variety of active pedagogies like project-based learning and design thinking.

The primary attraction of service learning to many independent schools lies not in the promise of greater academic achievement rather in the goals of students' connection to a local community with issues and lifestyles that are not known to them. The stories shared by school leaders and program directors confirm community connection and understanding as key reasons for the school's investment in creating public purpose programs that incorporate service learning (Park Tudor School, 2015, September 24; Mierke, 2013; Adams, 2000).

In fact, Torres' study of public purpose revealed that 75% of surveyed independent schools report having some form of service learning (2013, p. 7). A decade earlier, Ivor Pritchard wrote that K-12 private schools reported an 88% participation rate by at least some of their students in community service or service learning (as compared to a 68% rate for public K-12 students) (2002, p. 4).

Pritchard analyzed data of involvement in community service and service learning in both public and private schools; he found the leading three of ten reasons schools involved their students in these activities were: 1) "To help students become more active members of the community"; 2) "To increase students' knowledge and understanding of the community"; and 3) "To meet real community needs or foster relationships between the schools and surrounding community" (2002, p. 11).

Studying service learning with gifted students, Lee, Olszewski-Kulilius, Donahue and Weimholt summarize observations by Passow (1988, 1989):

Schools need to integrate learning resources from the community into classroom learning to enable gifted students to become more sensitive to community and global issues such as poverty, famine, war, racial conflict, depletion of resources, cultural conflict, communal health, employment, and so forth. Service learning is one example of a methodology that integrates community and global issues and academic content with purposeful learning objectives.

(2007, p. 168)

This type of understanding about community and global issues may be of great benefit also to children brought up in privilege (this is the majority of independent school students) because they are often unfamiliar and disconnected from people who live with poverty, immigration from war-torn countries, etc.

Westheimer and Kahne (2004) have provided critical distinctions in citizen engagement through a framework for thinking about three kinds of citizenship (also see Westheimer, 2008) (see Table 4) spanning community engagement to political engagement, offering almost a continuum from simplicity to complexity in action and intention. Alluding to outcomes most sought after as educational goals in youth, Westheimer and Kahne wrote, “To become truly effective citizens, students (especially those in high school) have to learn how to create, evaluate, criticize, and change public norms, institutions, and programs” (2000, p. 3). The types of activities common through community service programs (donations, drives, and relief-oriented activities) in schools would most often fall under the Personally Responsible Citizenship category or sometimes the Participatory Citizen category. While the assumptions and actions of the Participatory Citizen or Social Justice Oriented Citizen categories are evident in many high quality service learning initiatives and coursework that explore public good themes.

Table 4:

Kinds of Citizens			
	Personally Responsible Citizen	Participatory Citizen	Justice-oriented Citizen
DESCRIPTION	<p>Acts responsibly in his/her community</p> <p>Works and pays taxes</p> <p>Obeys laws</p> <p>Recycles, gives blood</p> <p>Volunteers to lend a hand in times of crisis</p>	<p>Active member of community organizations and/or improvement efforts</p> <p>Organizes community efforts to care for those in need, promote economic development, or clean up environment</p> <p>Knows how government agencies work</p> <p>Knows strategies for accomplishing collective tasks</p>	<p>Critically assesses social, political, and economic structures to see beyond surface causes</p> <p>Seeks out and addresses areas of injustice</p> <p>Knows about social movements and how to effect systemic change</p>
SAMPLE ACTION	Contributes food to a food drive	Helps to organize a food drive	Explores why people are hungry and acts to solve root causes
CORE ASSUMPTIONS	To solve social problems and improve society, citizens must have good character; they must be honest, responsible, and law-abiding members of the community	To solve social problems and improve society, citizens must actively participate and take leadership positions within established systems and community structures	To solve social problems and improve society, citizens must question and change established systems and structures when they reproduce patterns of injustice over time

Source: Westheimer, J. and Kahne, J. (2004). Educating the “Good” Citizen: Political Choices and Pedagogical Goals. *Political Science and Politics*, vol.37 (02), p. 242.

Research Methodology

Introduction

This study intended to explore whether courses that have a public good orientation promote the development of 21st century skills in high school students in independent schools. A public good course would teach nonprofit education, youth grantmaking or understanding and action to address community issues or needs.

Before determining an approach to research design, a scan of how 21st century skills have been assessed in schools was conducted through searches on Google and databases like ERIC. This revealed publications, tools and studies of independent researchers and major groups working around 21st century teaching and learning in K-12 schools (including NAIS, the Partnership for 21st Century Learning, Asia Society, International Society for Technology in Education, and Buck Institute for Education).

The Asia Society's "Measuring 21st Century Competencies" contains a table (see Table 5) that illustrates different formative and summative measurements for various competencies (segmented into the group's cognitive, interpersonal and intrapersonal categories) (Soland, Hamilton & Stecher, 2014). The data a school or teacher would receive by utilizing a number of these tools would be extensive and could provide feedback for instructional improvement in developing specific competencies (like communication, learning how to learn, or global awareness). Though, as Table 5 indicates, many assessments measure only a few competencies or measure competencies in relation to particular disciplines / subjects (i.e., math, science, reading).

Table 5: Examples of Measures of 21st Century Competencies

Measure	Format	Competency			Purpose	
Established Measures		Cognitive	Interpersonal	Intrapersonal	Formative	Summative
Advanced Placement	multiple choice	language				x
Formulating Hypotheses	multiple choice, open response	creativity			x	
Watson-Glaser	multiple choice	critical thinking			x	
Global Empathy Scale	self-report		global awareness		x	
Theory of Mind	self-report			mindset	x	
College and Career Ready School Diagnostic	self-report			mindset, learning how to learn, intrinsic motivation, grit	x	
Work Extrinsic Intrinsic Motivation Scale	self-report			intrinsic motivation	x	
Grit Scale	self-report			grit	x	
Cutting-Edge Measures						
PARCC and Smarter Balanced*	multiple choice, open response, performance	math, reading, critical thinking	communication		x	x
Singapore Elementary Portfolios	portfolio	math, science, reading, critical thinking	communication			x
World Savvy Challenge	performance	global awareness, critical thinking	global awareness		x	x
PISA*	performance	math, science, reading, critical thinking	communication, collaboration			x
Graduation Performance System	portfolio	math, reading, critical thinking	communication, global awareness	learning how to learn	x	x
Alejo language and culture simulator*	performance	language, critical thinking	communication, global awareness	learning how to learn	x	
SimScientists*	performance	science, critical thinking	collaboration	learning how to learn	x	
EcoMUVE*	performance	science, critical thinking	collaboration, communication	learning how to learn, intrinsic motivation	x	x
Mission Skills Assessment	cross-cutting	creativity	collaboration	resilience, intrinsic motivation, learning how to learn	x	x

Source: Soland, J., Hamilton, L. S. & Stecher, B. M. (2014). *Measuring 21st Century Competencies: Guidance For Educators*, Table 3 (p. 17). A Global Cities Education Network Report. New York: Asia Society.

Certainly, some of the “cutting edge measures” listed here seem to be the very types of “new models of assessment” referred to in a report written in 2008 for “Education Sector’s Next Generation Initiative.” It posited, “new models of assessment that measure both basic skills and more advanced skills are emerging to challenge the assumption that such skills can not be measured and to move us toward an assessment system that is more aligned with what students now need to know” (Silva, 2008, p. 6). The report shared examples of assessments utilizing new technologies (like the CWRA – the College, Work, and Readiness Assessment) that seek to measure both basic content knowledge and higher order skills.

Research Design

Seeking an answer to the primary research question, a few schools were identified with breadth and depth of programming and understanding related to public purpose, public good work and service learning. The schools would need to be willing to participate in a survey of students and their teachers and to answer basic background questions about its public purpose and school landscape. In order to understand the context of school setting in which the surveyed courses are offered, a basic interview protocol was designed to gather factual data through a telephone interview with a director or coordinator of a public purpose program at each school (see Appendix B for interview questions). The questions needed to be forthright, clear and unambiguous, seeking objective information such as, the size of the school’s financial aid awards in 2014 and the question, “Have any of your (high) school’s professional development

opportunities and readings for faculty been focused on themes related to 21st century teaching and learning and 21st century skills?”

A scan of studies on 21st century skills and measures was focused on identifying a survey tool that would (a) gather teacher and student self-assessment data; (b) be easy for teachers to administer and for students to take; (c) cover a core, smaller set of 21st century skills / competencies; (d) provide data on multiple indicators related to a complete set of skills rather than deep data on one or a few skills; and (e) have been used in other studies with a high reliability rating.

The survey instrument chosen was utilized by Nate Hixson, Jason Ravitz and Andy Whisman in 2012 for the West Virginia Department of Education to survey teachers who experienced different intensities of professional development in project-based learning and who used PBL in their classes. The instrument was based on a similar set of skills from a prior study by Innovative Teaching and Learning (ITL research) (Shear, Novais, Means, Gallagher, & Langworthy, 2010) and was influenced by the Deeper Learning framework of the William and Flora Hewlett Foundation, and the work of the Partnership for 21st Century Skills (see Appendix C for the influential P21 Framework for 21st Century Learning). The Deeper Learning Framework seeks the following learning goals: (a) Master core academic content; (b) Think critically and solve complex problems; (c) Work collaboratively; (d) Communicate effectively and (e) Learn how to learn. The eight skills of focus for Hixson, Ravitz and Whisman (2012) in their study were:

(1) Critical thinking skills; (2) Collaboration skills; (3) Communication skills; (4) Creativity and innovation skills; (5) Self-direction skills; (6) Global connections; (7) Local connections; and (8) Use of technology as a tool for learning.

For this new study, the five-point scale of the Hixson and colleagues survey instrument was slightly modified to allow frequency labels (choices) that did not assume a semester course (see Appendix D for the modified teacher survey). The original survey identified five to eight example practices for each of the eight skills and asked survey participants to rate each with a scale of five labels: almost never, a few times a semester, 1-3 times per month, 1-3 times per week, and almost daily. These labels would not apply well for a new study since the course length itself could vary from a trimester length to the entire year. Also some courses would incorporate service learning, which could occur for a markedly shorter timeframe of activity than the entire length of the course. Additionally, certain skills as a focus may not be appropriate for particular courses (for instance, the “global connections” skill) so there was a “not relevant” option needed. To maintain a five-point scale and eliminate confusion, the two potentially duplicative labels were also changed – the Hixson study had used both “a few times a semester” and “1-3 times per month” which could create overlap. The scale for the five to eight example practices of each skill in the new survey read: Not relevant for this course, almost never, 2-3 times, 4-6 times, almost daily.

A second set of questions related to each skill asked about the teacher’s intent to teach the skill and the perception that students had learned the skill. In order to retain a five-point scale, the original scale’s frequency choice of “to a very great extent”

was eliminated. The five labels were now: Not relevant for this course, not really, to a minor extent, to a moderate extent, to a great extent.

For the creation of a student survey (Appendix E), the new teacher survey was slightly modified with language that identified the students as receivers or participants rather than language for teachers (as designers or deliverers of the content). For instance, in the Collaboration skills section, the teacher survey reads “In your teaching of your TARGET COURSE, how often have you asked students to do the following: Give feedback to peers or assess other students’ work?” The student survey reads, “In your COURSE, how often have you been asked to do the following: Give feedback to peers or assess other students’ work?”

Research Method

After identifying and adapting a survey tool, developing an interview protocol and developing communications and documents for participating schools, approval from Human Subjects Office at Indiana University was sought and attained. The steps followed to implement the research were:

- Step One: Send recruitment emails (see Appendix F) to public purpose program directors or coordinators at seven schools previously identified as meeting the pre-determined requirements listed in the “Site Selection Criteria” section to follow. Attach the “Study Information Sheet” (Appendix G) to the email correspondence in order to provide details about

participating in the study for the coordinator and school leadership who would need to consider and approve school participation.

- Step Two: Upon acceptance to participate in the study by schools, send an email (Appendix H) entitled “Email and Surveys for Teachers in 21st Century Skills Study” to the school’s public purpose coordinator / director.⁸ This email was designed for three purposes: (a) to explain to the coordinator expectations for their role (mainly recruiting teachers of appropriate classes and participating in a telephone interview with the researcher); (b) to contain content of an email to forward on to faculty members that would explain the steps for their participation in the study; and (c) to share two attachments that would also be forwarded to participating teachers – the documents were: “Instructions for Administering and Completing the ‘21st Century Skills’ Surveys” (Appendix I) containing embedded links to online student and teacher surveys and a “Letter to Inform Parents / Guardians of Student Survey Participation” (Appendix J).
- Step Three: Teachers take and administer the online surveys with their students. (This step occurred over the span of nine days, with five teachers and 112 students participating). The “Informed Consent” for teachers and “Assent to Participate” form for students are embedded as the second pages

⁸ Through email exchanges and telephone conversations, two schools confirmed an interest and ability to participate, four schools explained because of timing or school calendar an inability to participate, and one did not respond.

of the respective surveys. (For three students who chose not to provide assent, the survey closed upon their denial).

- Step Four: Conduct telephone interviews with the public purpose program coordinators of participating schools; send and receive “Informed Consent” forms (Appendix K) through email.

Site Selection Criteria

The two schools participating in this study were pre-kindergarten through 12th grade schools and independent (that is, private and not-for-profit) day schools. They met a number of criteria that indicate institutional commitments to the public good and an interest in developing this inclination in their students. Each school in this purposeful sample:

- Exhibits an expressed commitment to fostering in their students an interest in their communities, social responsibility and the public good, as evidenced by language used in the school’s mission statement, philosophy statement, “portrait of a graduate” and / or graduation requirements.
- Has more than one dedicated program that encompasses community service, service learning, public-private partnerships, public purpose, civic engagement, and/or philanthropy education; the program offers activities for students.
- Offers one or more high school courses (elective or required) with a public good focus – these courses engage students in nonprofit education, youth

grantmaking or learning about and addressing issues in the local or global communities.

- Offers one or more high school courses (elective or required) that involve students in a service learning initiative or project.
- Employs at least one staff person whose position title and responsibilities encompass working with students in the areas of community service, service learning, public-private partnerships, public purpose, civic engagement, and/or philanthropy education.

Survey Tool Reliability

Searching for a survey tool rather than creating one provided an opportunity to identify one with high reliability that had validated lists of classroom practice examples connected to a set of skills defined through an existing, well-accepted framework.

Fortunately, the survey used by Hixson, Ravitz and Whisman (2012), given its results met this goal. Looking for high reliability, Hixson and colleagues had adjusted a survey tool utilized by Novais and Gallagher in 2010. For their new tool, they “wrote new items and re-used practice items based on the most reliable items” (Ravitz, 2014, p. 2). After use in the 2012 study, Ravitz shared that the instrument has excellent reliability with a high correlation between items, with “extremely reliable overall measures for each skill” (Ravitz, 2014, p. 2). Ravitz contends that reliability also stems from the use of definitions for the skills in each survey section, paired with lists of related practices and

perception questions. The most significant question about the use of an adapted survey tool was its applicability with high school students.

Considerations and Limitations

This study meant to provide a first look at the intersection between public good oriented high school courses and 21st century skills. It has numerous limitations that inform consideration for further research. First, the study is a small (student sample is N=112) purposeful sample and does not employ a comparison group.

Second, this is a simple one-instrument study and this approach limits findings, taking into consideration the implication of this observation by the Asia Society:

While there is extensive research on how students progress from one skill to the next in mathematics and writing, there is very little research on the stages of development for many of the competencies described in this chapter. For example, researchers cannot yet describe the “learning progressions” students follow to go from novice to accomplished in terms of collaboration or grit.

(Soland, Hamilton & Stecher, 2014, p. 8).

Like Soland and colleagues, Shear, Novais, Means, Gallagher, and Langworthy (2010) recommended utilizing mixed methods.

A third significant consideration is that a deeper contextualized understanding would be informative: “it is necessary to collect data at multiple levels within the system, from the national or regional context to the school, educator, classroom, and student” (Shear et. al, 2010, p. 9). An independent school is like a self-contained school district since the school has no outside governing body and, to varying degrees, has minimal outside curriculum standards. Yet, there are influences that affect the curricular

life of the school and the strategic, operational and programmatic focal areas for heads of school; just a few of these influences are a school's membership or lack of affiliation with NAIS, participation in independent school regional associations, and adherence to state standards for high school course requirements. Gathering data about, for instance, the degree of curricular independence of the school and how much the school's academic leaders participate in professional conferences around 21st century teaching and learning sponsored by NAIS and other associations would provide insight on measurement findings. In a study with a large school sample size, gathering data about these types of issues may show correlation of particular contextual factors with skills development.

Finally, the presentation of 48 classroom practices related to the eight 21st century skills might imply that all practices are important and necessary. These practices represent a variety of ways to build each skill. Naturally, the course subject, objectives, pedagogies (like service learning), and the parameters of lessons or projects allow or fit more naturally with some practices over others. Similarly, some practices are more desired or broadly applicable than others; for instance, "decide how they will present their work or learning" compared with "discuss issues related to global interdependency."

Study Findings

Background

Five faculty members at the schools discussed in the next section participated in this study. Each teacher administered the “Survey for Students: Measuring 21st Century Skill Development in Service Learning and Public Good Courses in Independent High Schools” to a total of 112 students in their five courses collectively.⁹ In addition, the teachers each completed a “Survey for Teachers: Measuring 21st Century Skill Development in Service Learning and Public Good Courses in Independent High Schools.” Due to the small pool of teachers, most of the findings that follow are from analysis of the student surveys and focus on students’ perceptions of what they have experienced. The surveys were administered the first to second week of November during courses that were either one trimester or semester in length; in other words, the majority of the course’s curriculum had been covered at the time of the survey taking.

Initially answering a background question, students were asked to describe their course as one that incorporates service learning projects or initiatives¹⁰ or a public good oriented course that teaches students about nonprofit education, youth grantmaking or learning about and addressing community issues or needs. Teachers informed 73.2% of students to indicate service learning while 26.8% chose the description of public good

⁹ An additional three students across the five classes did not assent to participate.

¹⁰ Service learning was defined on the survey as a “course-based, credit bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs, and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility” (Bringle & Hatcher, 2009, p. 38).

course; essentially, four courses are defined as service learning and the last as public good. The mixture of classes covered in this study included American Literature, Environmental Science, Religious Studies, and topical Social Studies courses.

Unfortunately, none of the courses had youth grantmaking components. The four courses described as service learning incorporated the pedagogy in a significant way – two courses infused service learning throughout the course’s duration, one course utilized it for more than a month and the last class for a total of 3-4 weeks.

Two Schools With Similar Purpose

To follow are brief sketches of the two schools with students and faculty participating in this study.¹¹ These provide a general understanding of the size, type, endowment levels, and public purpose commitments of the schools. They each have considerable service learning programs, staffing and a variety of courses with a public good orientation. As the NAIS public purpose benchmarking study predicts, schools of their size (700+ students) offer a greater variety of public purpose activities and missions that reflect this commitment (Torres, 2013). Among independent schools, they are exemplars. It is probable that selecting schools of this type biases the study results at least towards higher levels of encouraging students’ “local connections” and “global connections.”

The Leighton School. Past its 100-year anniversary, the Leighton School is located on the outskirts of a city with a population of nearly 800,000. It is a co-ed day

¹¹ The names of the schools have been changed to protect the confidentiality of teachers and students participating in this study.

secular school of nearly 1300 students in its pre-kindergarten through twelfth grades. With a strong commitment to academics, arts and diversity, a Leighton education is sought after. Leighton's high school tuition is approximately \$25,000 and nearly 20% of students receive some financial aid. The school's endowment is over \$50 million.

A variety of programs exemplify both the school's institutional commitments to public purpose as well as its focus on building students' sense of social responsibility. Leighton is one of a number of independent schools that, on its campus, operates a summer and weekend academic enrichment program for middle school students from local public schools. The school has well-developed community service or service learning initiatives for students in each grade level. For service, service learning and curricular initiatives, it has an extensive number of partnerships with local nonprofit organizations (like hunger organizations, volunteer organizations, museums, and groups serving local ethnic populations). Like other large schools, Leighton offers global experiences like exchanges and service trips. The school's full-time Director of Service Learning organizes these activities and works with service learning faculty across the divisions.

Leighton's high school offers an array of electives that incorporate the service learning approach and public good themes. Among these are gender studies, world cultures, comparative religion, literature of minority groups, a global community course, AP Environmental Science, and courses with significant projects conducted in partnership with local museums.

Regarding 21st century education and 21st century skills, professional development at Leighton includes summer faculty reading, book clubs, and four mandatory all-school meetings throughout the year. Some of the readings have included *21st Century Skills: Learning For Life In Our Times* (Bernie Trilling and Charles Fadel), *Local: The New Face of Food and Farming in America* (Douglas Gayeton), *Cosmopolitanism: Ethics in a World of Strangers* (Kwame Anthony Appiah), and *Toxic Charity: How Churches and Charities Hurt Those They Help and How to Reverse It* (Robert D. Lupton). Topics of focus have included: Critical thinking, technology, collaboration skills, communication, equity and inclusion, and global competency.

St. Thomas. St. Thomas School is older than 125 years and located in a city of over 1.2 million people. It is a pre-kindergarten through twelfth grade, co-ed day school of approximately 1000 students. It is known for its strong commitment to Christian values and character, rigorous academics, arts and athletics. Annual high school tuition is around \$30,000. Nearly 35% of St. Thomas students receive financial aid and the student body is just under 30% students of color. The school's endowment is nearly \$60 million.

With a justice and compassion-oriented philosophy, St. Thomas has been historically committed to create opportunities for students' active engagement with the issues of their community and world. The school has a variety of long-time community partnerships, as well as new ones focused on pressing needs of their city. These include food shelters, public and charter schools, and an organization that serves incarcerated citizens. Students have opportunities to engage in community service activities and

service learning at all grade levels, and a high school Service Council guides and organizes activities. Tutoring and teaching other students is a recurring service and relational activity for St. Thomas students across their time at the school.

In the high school academic arena, many of St. Thomas' offerings (required and elective) contain public good oriented themes. Specific examples include AP Environmental Science, religious studies, and justice, peace, poverty, and urban studies electives. With its strong commitment and many obligations in service learning, community service and partnerships, St. Thomas has a Director of Service Learning (who is also a part-time faculty member) and many teachers involved in service learning.

Like a growing number of independent schools across the country, St. Thomas has recently focused faculty professional development on building students' creativity, collaboration and critical thinking skills. The school has added a Maker space and STEAM approach. Workshops and brown bag lunches have focused on topics like project-based learning, flipped classroom, design thinking, and diversity. The school provides summer creativity grants to faculty to incorporate more interdisciplinary and global connections into their curriculum. The faculty is now asked to attend conferences related to 21st century skill building and to relate what they learn to their classroom. To the benefit of service learning and public purpose initiatives, the school's intention is that solutions-oriented curriculum development and student-engaged learning will occur with the incorporation of collaboration, creativity, critical thinking and design processes.

Key Findings

The major insight from this study is that 21st century skills can be developed through high school courses that incorporate public good themes. This is supported by student self-reported learning and teachers' feelings about student learning of each skill. Students conveyed a substantially high level (an average of 76.79%) of teacher focus on developing their skills, as well as high levels of their own learning of each skill (with an average of 71.79% across the skills). Teachers also reported a high level focus on trying to develop most 21st century skills (other than Using Technology as a Tool for Learning) and fairly high levels of student learning of those skills (other than making Global Connections and, again, Using Technology). Table 6 summarizes students' self-reported perceptions of their teachers' attempts to teach the skills and their own learning of each skill (rated at "to a great extent" and "to a moderate extent"), as well as

Table 6				
Comparison of Teacher Focus on Developing Skills and Student Learning of Each Skill				
Skill	Students Report Teacher Tried to Develop The Skill	Teachers Report Trying to Develop The Skill	Students Report They Feel They Learned The Skill	Teachers Report They Feel Students Learned The Skill
Critical Thinking	87.6%	100%	80.4%	100%
Collaboration	83.0%	80%	71.5%	80%
Communication	80.3%	80%	74.2%	80%
Creativity & Innovation	72.4%	80%	66.1%	60%
Self-Direction	76.8%	100%	74.1%	80%
Global Connections	73.2%	80%	67.0%	60%
Local Connections	75.0%	80%	73.2%	80%
Using Technology As A Tool For Learning	66.0%	40%	67.8%	60%

teachers' perceptions of their attempt to teach each skill and how much they felt students learned (again, rated at "to a great extent" and "to a moderate extent"). This table shows that the three skills students believed their teachers were most trying to develop through their courses were Critical Thinking (87.6%), Collaboration (83%) and Communication (80.3%) and the skills the teachers report that they were most interested in developing were Critical Thinking and Self-Direction (at 100% each). Interestingly, Critical Thinking, Collaboration and Communication might be considered the most "classical" or timeless skills of the eight skills studied. The skill students thought had the lowest focus by teachers (and perhaps most connected with "21st century education") was the Use of Technology as a Learning Tool (66%); interestingly, it was also the skill where students reported a slightly higher learning rate than teacher focus rate. The second lowest scored skill, Creativity and Innovation (72.4%) incorporates "innovation" the buzzword of 21st century education.

Table 6 also shows Collaboration is the skill with the largest gap between students' reported learning of the skill and their perception of teacher focus on developing it. This type of gap prompts questions. For instance, is it possible that there was a gap between teachers and students in their understanding of effective collaboration or was collaboration defined as well as other aspects of service learning when it was part of service learning courses?

Another key finding is that teachers use a number of tasks or approaches in the classroom that develop 21st century skills. Of the 48 classroom practices in this study, 50% or more students rated 36 practices occurring "almost daily" or "4-6 times" during

their course. Only 11 practices had a high response rate (40% or higher) of occurring “almost never” or only “2-3 times” during the course. Tables 7 and Table 8 list the most and least frequently reported classroom practices according to students within each 21st century skill category; these were the skills with the highest ratings of occurring, respectively, “almost daily” or “almost never.”

Some of the practices listed in Table 7 (“most frequent”) are not surprising as they might be commonplace in typical 20th century classrooms – such as “work in pairs or small groups to complete a task together” (Collaboration) and “answer questions in

Table 7		
Most Frequent Classroom Practice For Each 21st Century Skill (Student Reporting)		
Skill	Classroom Practice	% Reporting Almost Daily in Class
Using Technology As A Tool For Learning	Use technology to keep track of your work on extended tasks or assignments	57.1%
Critical Thinking	Try to solve complex problems or answer questions that have no single correct solution or answer	56.3%
Global Connections	Understand the life experiences of people in cultures besides your own	53.6%
Collaboration	Work in pairs or small groups to complete a task	50%
Local Connections	Investigate topics or issues that are relevant to your family or community	48.2%
	Respond to a question or task in a way that weighs the concerns of different community members or groups	48.2%
Self-Direction	Monitor your own progress towards completion of a complex task and modify your work accordingly	45.5%
Creativity & Innovation	Generate your own ideas about how to confront a problem or question	44.6%
Communication	Answer questions in front of an audience	25.9%

front of an audience” (Communication). Others get to higher order thinking, like

“Generate your own ideas about how to confront a problem or question” (Creativity and Innovation) and “Try to solve complex problems or answer questions that have no single correct solution or answer” (Critical Thinking).

In the Table 8 (“least frequent”), a few practices stand out. “Use technology to interact directly with experts or members of local/global communities” almost never occurred in class for 20.5% of students. “Analyze how different stakeholder groups view an issue” was rated at 9.8% and “compare information from different sources before completing a task or assignment” at 11.6%; these classroom practices help students see

Table 8		
Least Frequent Classroom Practice For Each 21st Century Skill (Student Reporting)		
Skill	Classroom Practice	% Reporting Almost Never in Class
Communication	Convey your ideas using media but NOT a written paper (for example, posters, videos, blogs, etc.)	25%
	Prepare and deliver an oral presentation to the class, teacher or others	25%
Using Technology As A Tool For Learning	Use technology to interact directly with experts or members of local/global communities	20.5%
Creativity & Innovation	Use of idea creation techniques such as brainstorming or concept mapping	18.8%
Collaboration	Give feedback to peers or assess other students’ work	17%
Self-Direction	Use peer, teacher or expert feedback to revise your work	16.1%
Global Connections	Study the geography of distant countries	14.3%
Critical Thinking	Compare information from different sources before completing a task or assignment	11.6%
Local Connections	Analyze how different stakeholder groups view an issue	9.8%

and understand complexity of issues and can make learning and their resulting work deeper and more refined.

Few students saw practices as “not relevant” to their course, with ratings spanning from 0% to 34.8%. Among teacher responses, only two of forty-eight teaching practices were considered “not relevant” and, then, only by one of the five teachers. Table 9 shows the averages of the “not relevant” scores for all practices within each skill category. There are a few interesting findings here. Critical Thinking is viewed as the most relevant skill by students, with only 2.25% of students rating the skill as “not relevant.” Also, there is a significant gap between perceptions of relevancy of Local Connections and Global Connections, with a scoring difference of 3.96% versus 15.48%.

Table 9		
Averages of Student and Teacher Scores of “Not Relevant” Practices By Skill Category		
Skill	Students’ “Not Relevant” Scoring Average For All Practices	Teachers’ “Not Relevant” Scoring Average For All Practices
Global Connections	15.48%	3.33%
Using Technology As A Tool For Learning	15.19%	0%
Communication	10.72%	0%
Creativity & Innovation	9.98%	0%
Self-Direction	8.01%	0%
Local Connections	3.96%	0%
Collaboration	2.85%	3.33%
Critical Thinking	2.25%	0%

Averaging “almost daily” ratings for all practices within each skill category provides a glimpse into how frequent students and teachers feel each skill is focused upon. As Table 10 shows, students report that Critical Thinking, Local Connections and

Table 10		
Averages of Student and Teacher Scores of Skills Taught “Almost Daily”		
Skill	Students’ “Almost Daily” Scoring Average For The Skill	Teachers’ “Almost Daily” Scoring Average For The Skill
Critical Thinking	45.12%	36.67%
Local Connections	43.04%	24.00%
Global Connections	41.82%	16.67%
Self-Direction	34.81%	22.86%
Using Technology As A Tool For Learning	31.26%	12.50%
Creativity & Innovation	30.54%	8.00%
Collaboration	30.50%	20.00%
Communication	16.78%	0.00%

Global Connections stand out as most likely, and Communication, by far, is least likely to occur “almost daily.” Interestingly, Critical Thinking is also the skill which teachers report being most likely to nurture with an “almost daily” frequency and, again, Communication the least likely for them to promote with this frequency. There are significant gaps between student and teacher perceptions about how much these skills are a daily focus. This discrepancy poses questions that perhaps larger, more in-depth studies might be able to answer (see “Recommendations For Further Research”).

Meanwhile, Table 11 shows the averages for “almost never” ratings for all practices within each skill category. In this case, students rated Communication, Using Technology, Creativity and Innovation, and Collaboration as those skills highest in “almost never” being taught in their course. Interestingly, student responses for “almost never” are complementary to those in Table 10 for the skills considered lowest in occurring “almost daily.” Again, there are differences (though smaller here) between student and teacher reporting.

Table 11		
Averages of Student and Teacher Scores of Skills Taught “Almost Never”		
Skill	Students’ “Almost Never” Scoring Average For The Skill	Teachers’ “Almost Never” Scoring Average For The Skill
Communication	18.76%	16.00%
Using Technology As A Tool For Learning	11.95%	25.00%
Creativity & Innovation	10.90%	12.00%
Collaboration	10.42%	16.67%
Self-Direction	10.09%	5.71%
Global Connections	9.82%	13.33%
Local Connections	6.62%	20.00%
Critical Thinking	6.27%	6.67%

Critical Thinking Skills in Public Good Courses

Of all eight skills measured, students reported the highest frequencies of classroom practices in relation to Critical Thinking; all six practices had reported frequencies in the 60, 70 and 80 percentiles. The highest practices selected in the “almost daily” and “4-6 times” during the course categories were “try to solve complex problems or answer questions that have no single correct solution or answer” (at 82.2%) and, closely following, “summarize or create your own interpretation of what you have read or been taught” (at 79.5%). The practice with the lowest frequency (scored at “almost never” or “2-3 times”) was “develop a persuasive argument based on supporting evidence or reasoning” at 34.8%. Students highly agreed (87.6%) that their teachers were trying to develop their Critical Thinking Skills and 80.4% felt that they had actually learned these skills through the course. See Appendix L for the results of students’ reporting on six individual classroom practices related to Critical Thinking.

Collaboration Skills in Public Good Courses

The classroom practice related to helping them learn Collaboration Skills that students chose as clearly most frequent was to “work in pairs or small groups to complete a task together” (77.7%). The collaborative practice that students thought they were least often asked to do was to “give feedback to peers or assess other students’ work” with 59% saying they “almost never” or “2-3 times” during the course did this. Eighty-three percent of students felt their teachers were trying to develop Collaboration Skills, while only 71.5% felt they learned these skills in the course; this was the largest gap between perceived teacher focus and perceived success of acquiring a skill. See Appendix M for the results of students’ reporting on six individual classroom practices related to Collaboration Skills.

Communication Skills in Public Good Courses

Regarding practices that nurture Communication Skills, 50.9% of students reported “answer questions in front of an audience” happened “almost daily” or “4-6 times” and close behind at 48.2% was the second most frequent practice, “decide how you will present your work or demonstrate your learning.” Meanwhile, 65.2% of students felt that to “convey your ideas using media but not in the form of a written paper (for examples, posters, videos, blogs, etc.)” almost never happened or only happened 2-3 times during their course. Students reported at a rate of 80.3% that their teacher was trying to develop Communications Skills through their course, and 74.2%

felt that they were learning these skills. See Appendix N for the results of students' reporting on five individual classroom practices related to Communication Skills.

Creativity And Innovation Skills in Public Good Courses

Indicating “almost daily” or “4-6 times” during the course, students chose “generate your own ideas about how to confront a problem or question” (66%) and “invent a solution to a complex, open-ended question or problem” (61.6%) as the two practices they most frequently experience. The practice selected by students as least frequent in helping them learn Creativity and Innovation was to “use idea creation techniques such as brainstorming or concept mapping” – 44.7% said this had happened “almost never” or “2-3 times” during the course. Students perceived their teachers' intention to develop Creativity and Innovation Skills at a rate of 72.4%, while only 66.1% reported learning skills in this area; this was the skill with the lowest perceived learning among all eight skills. This finding is not surprising, given that creativity and, particularly, innovation are a very recent focus in schools, occurring in perhaps the past five to ten years. See Appendix O for the results of students' reporting on five individual classroom practices related to Creativity and Innovation Skills.

Self-Direction Skills in Public Good Courses

The practice chosen as most frequently used to develop their Self-Direction, “monitor your own progress towards completion of a complex task and modify your work accordingly” had a rate of 68.7%. Meanwhile, the practice they saw as least

frequent (rated “almost never” or “2-3 times”) was “use peer, teacher or expert feedback or revise your work” (42%). Perceived intention of teachers to grow their Self-Direction skills was 76.8%, while 74.1% believed they were learning this in their course. See Appendix P for the results of students’ reporting on seven individual classroom practices related to Self-Direction Skills.

Global Connections in Public Good Courses

Students chose “understand the life experiences of people in cultures besides your own” as the practice of highest frequency (69.7%), occurring “almost daily” or “4-6 times” during the course. The practice they chose for lowest frequency (“almost never” or “2-3 times”) in this skill category was “discuss issues related to global interdependency (for example, global environment trends, global market economy)” (29.5%). Only 67% of students felt they had learned to make Global Connections in their course, though 73.2% thought their teachers intended to develop these connections. These findings may be explainable because only one course of the five had a distinctly global focus and service learning often looks at an issue through a local lens and / or engages students locally rather than globally. See Appendix Q for the results of students’ reporting on six individual classroom practices related to Global Connection Skills.

Local Connections in Public Good Courses

“Investigate topics or issues that are relevant to your family or community” was the classroom practice that students indicated had the highest frequency (72.3%) to

help them make Local Connections. The reported practice they experienced “almost never” or “2-3 times” was to “talk to one or more members of the community about a course project or activity” at 37.5%. Closely aligning perceived teacher focus and success in this category, seventy-five percent of students reported that their teachers were trying to develop Local Connections, and 73.2% felt they had learned to make these connections through the course. See Appendix R for the results of students’ reporting on five individual classroom practices related to Local Connection Skills.

Use of Technology As A Tool For Learning in Public Good Courses

The highest rated practice in this skill category, chosen by students as occurring “almost daily” or “4-6 times,” was “use technology to keep track of your work on extended tasks or assignments” at 77.6%. Meanwhile, the practice chosen as having the lowest frequency was “use technology to interact directly with experts or members of local/global community” at 45.5%. Again, closely aligning perceived teacher focus and reported student learning, 66% of students felt their teachers were trying to develop students’ skills in Using Technology As A Tool For Learning and, interestingly at a higher percentage, 67.8% felt they had learned to use technology. See Appendix S for the results of students’ reporting on eight individual classroom practices related to Using Technology As A Tool For Learning.

Assessing Student Learning of 21st Century Skills

An insightful takeaway from teacher survey responses comes from their answers to how much they “have been able to effectively assess students’ skills” in each given area. Their ratings for every one of the eight skills are lower for their ability to “assess students’ skills” than for *both* their efforts “to develop students’ skills” and how much they perceive “students have learned” in that skill area – lower by at least 20%. For instance, reporting on trying to develop students’ critical thinking skills, 60% of teachers said “to a great extent” and 40% “to a moderate extent.” Meanwhile 20% felt that most students had learned critical thinking “to a great extent” and 80% “to a moderate extent.” Yet, reporting on how much they had been able to “effectively assess students critical thinking skills,” only 20% of teachers said “to a great extent” and 20% “to a moderate extent.” This finding indicates that teachers may feel more confident that they are teaching, and students are learning, 21st century skills and less sure of their ability to assess the skills.

Teacher Surveys

Teacher surveys were not conducted with the intention of extensive analysis and comparison with student results to draw conclusions because the number of teacher surveys (N=5) is small. Although a few significant comparisons were presented in the prior sections. Comparison of results makes it evident that if academic leaders (or teachers themselves) decide to use these surveys to measure effectiveness, it is highly informative to have data that allows teachers to see their own perceptions around

pedagogical focus and student learning side-by-side, with those of their students' self-reported perceptions.

An example of the importance of these comparisons is evidenced by looking at student perceptions of relevancy of classroom practices that differ from their teachers' perceptions. As mentioned previously, only two of the 48 practices – “create joint products using contributions from each student” (for Collaboration) and “study the geography of distant countries” (for Global Connections) – were labeled by one teacher each as “not relevant” to their courses. However, varying percentages of students (between .9% and 34.8%) rated 44 of 48 practices as “not relevant” to their course. In addition, student perceptions of high frequency of classroom practices also differed from their teachers' perceptions. Notably, for a majority of practices, students skewed higher, toward “almost daily” when teacher responses tended toward “4-6 times.”

These differences in perspectives beg several questions:

- Do students feel what they are learning is relevant?
- Do students understand why they are being asked to learn specific things or do certain activities?
- When teachers communicate clearly the purpose and expectations behind each activity students undertake, do students represent similar frequency of the activity and perceptions of relevancy to those of their teachers?
- For teachers that focus on student autonomy and choice in learning experiences, would there be a smaller gap in student and teacher perceptions of relevancy for any given classroom practice?

Discussion of Findings

The findings of this study provide larger lessons as well as takeaways about specific details of the survey instrument. Additionally, a number of recommendations for further research are suggested in next section. First and significantly, the 48 classroom practices developed for study of these eight skills were not chosen with public purpose in mind. Yet, some of the specific classroom practices involve activities and work that very directly relate to the perspectives of others, understanding and addressing social problems, and bettering the community. For instance, many practices of highest frequency listed in Table 7 are extremely useful activities toward these purposes. They are:

- Try to solve complex problems or answer questions that have no single correct solution or answer (Critical Thinking)
- Understand the life experiences of people in cultures besides your own (Global Connections)
- Work in pairs or small groups to complete a task together (Collaboration)
- Investigate topics or issues that are relevant to your family or community (Local Connections)
- Respond to a question or task in a way that weighs the concerns of different community members or groups (Local Connections)
- Generate your own ideas about how to confront a problem or question (Creativity and Innovation)

Second, some other classroom practices with a low frequency relate to student autonomy or choice. For example, “decide how you will present your work or demonstrate your learning” (with a total of 51.9% between “not relevant,” “almost never” and “2-3 times” ratings), “choose for yourself what examples to study or resources to use” (with a total of 39.2% between “not relevant,” “almost never” and “2-3 times”), and “create an original product or performance to express your ideas” (with a total of 54.5% between “not relevant,” “almost never” and “2-3 times”). Daniel Pink’s findings around human motivation and the significance of “autonomy, mastery and purpose” have been adopted in education as a way of understanding how to raise student engagement (2009). Long before Pink, the K-12 Service Learning Standards for Quality Practice recommended “youth voice” as a standard for effective service learning (National Youth Leadership Council, 2008). Intentional focus on these practices, where applicable, may create a benefit for teachers of increased student engagement.

Finally, the findings around the Use Of Technology As A Learning Tool reveal that teachers have the opportunity to more meaningfully utilize technology for learning and to help students connect with people and communities across the globe. Though technology may provide an easy and dynamic alternative to the old daily calendars in which students would keep track of their assignments, this highly frequent but low-level use is not technology’s great promise. Tools like Skype, email, Twitter, chat rooms, etc. provide access unheard of in history to a profound number of resources and in-person connections – real-world stories, expertise of leading thinkers and organizations, and nearly instantaneous feedback about ideas from peers or experts.

Further Research And Conclusion

Recommendations For Further Research

This study was perhaps a first effort to explicitly connect high school courses that have public good themes or approaches with the development of 21st century competencies. With a purposeful sampling method, the study sample was small (students: N=112; teachers: N=5; and courses: N=5) and included two large independent schools. There was no comparison group, both in terms of schools and courses without a public good orientation and schools that do not focus in any way on 21st century competencies and approaches. Though the applicability of this study's findings are limited, the findings are promising and provide insights and questions that will hopefully spur further exploration of the connection between public good courses and 21st century skills as well as further use and study of this survey instrument by researchers and teachers. The insight gained by further research – like studies described in this section – and strategic dissemination of findings could have significant implications for teaching practice and student growth in schools.

The first recommendation is for teachers to use the teacher and student survey instruments as a pre-test, post-test assessment in order to focus intentionally on particular practices that build 21st century skills. Teachers, working with their school's academic leaders or guidelines understand which skills and which classroom practices are of greatest interest to the school (as evidenced by its academic plan, the portrait of a graduate, essential questions, etc.). Working with researchers, a study could be designed with teachers utilizing the pre- and post-test approach in semester long and

yearlong courses in a large number of schools (providing an additional variable to study – length of time). Such a survey might be more beneficial if it also gathered information about the school – including school size, infiltration of 21st century learning pedagogies, and density of public purpose programming – thus allowing for findings to be considered in comparative groupings. The resulting data would help schools quantify and track learning impact around 21st century skill development efforts. This information is vital for making data-driven decisions around academics.

Second, a study with a variety of comparison groups that paired course types (i.e., math with math; history with history) could likely lend useful insights about the influence of pedagogical approaches on skill development. For instance, a traditional math class that utilizes primarily direct instruction and worksheets paired with a class in which students learn math concepts and apply them through service learning and project-based learning; or a world geography class that heavily uses a textbook and one that teaches the same themes by connecting students to a local refugee community and to peers in schools internationally.

Third, a study with a large group of independent schools designed to compare results across disciplines could be very useful for academic planning with department chairs, setting “essential learnings” across disciplines, work of (non-discipline-based) professional learning communities, and interdisciplinary course development. Clearly, certain classroom practices related to the eight skills studied here are more logically congruent in the study of particular disciplines while others may be objectives of most high school courses. Expectations for student scoring on a survey of this type should be

adjusted with this in mind and analysis of findings by academic leaders should consider the objectives of each individual practice in the context of particular disciplinary goals as well as broad student skill development.

Finally, a fourth opportunity for research may not be through replication of the use of this survey instrument in other schools, but rather a new study utilizing other tools that could gather data more fully about the approaches and effectiveness of teachers' assessment of 21st century skills. Key findings here reveal that the teachers reported lower rates of effectiveness in assessing skill development than their ratings of student acquisition of those skills. Once more is understood, a greater opportunity may exist to support the growth of strategies, tools and professional development for teachers to learn how to assess students' skill acquisition.

Conclusion

In his 2006 TED Talk, "Do schools kill creativity?" (viewed by 36 million people), Sir Ken Robinson asserted that industrial age-style classrooms (lecture-driven and content heavy) were still the norm. This is an image driving change in schools today. The potential for schools to intentionally create more engaging, student-centric, relevant learning for today's students lies in reframing the classroom experience. To achieve this, national associations, consulting firms and thought leaders have promoted interdisciplinary approaches, student-centered and inquiry-based pedagogies (like project-based learning), instructional technologies (like flipped learning), real-world application of content (e.g., internships and service learning), and a focus on building essential skills

(Lichtman, 2014; Independent School Management, 2011; NAIS Commission on Accreditation, 2010; Robinson, 2006; Bassett, 2002). These changes are seen as keys to driving students' intrinsic motivation and preparing them for success in college and professional life in today's industries. Many schools are investing in professional development opportunities for faculty and strategic plans built on a new vision for the ways students best learn.¹² Still, teachers and academic leaders need other tools to help schools evolve. Tools like this survey and other research methods can help teachers focus in on particular pedagogical approaches and utilize data to attain targeted goals for improved teacher practice and student learning.

This study finds that 21st century skills are developed through public good oriented courses in schools with resources and cultural values that support public purpose. Surveyed students reported perceptions of high or fairly high levels of learning in all eight twenty-first century skills and high frequencies of many classroom practices connected to these skills. In some cases, the skill or practice clearly relates to public purpose themes or activities. For instance, in the sample of courses surveyed, the skill of learning to make Local Connections is reported by students at a high level of learning and the practice of "understanding the life experiences of people in cultures besides your own" is a frequent focus of classroom activity. Hopefully, the connections found in this study will inspire other schools to utilize these or other surveys to verify and expand findings.

¹² Independent School Management (2011), one of the largest consulting firms for schools, recommends that 3% of a school's budget be dedicated to professional development; this is one of its 20 predictors for school success in the 21st century.

Schools need data-driven incentives to align goals between academics and public purpose in order to leverage greater impact in both areas of student life. Traditionally, goals in schools have not been aligned broadly to connect the separate objectives of the core curriculum, elective courses, extra-curricular efforts (like community service and global trips), and experiential pedagogies (like service learning). Yet, schools are moving in this direction. The findings here also show promise that learning for academic life in the 21st century and learning for public contribution could be synergistic.

This study shows that a number of activities seen as practices that can grow 21st century skills also relate to community issues and actions that benefit the public good. The core curriculum of high schools contains common good-related themes like independence vs. interdependence, knowing “the other” and how to use one’s voice. Also, curricular experiences provide basic knowledge in a given subject such as how to figure out surface area or rate of traffic or water quality. This knowledge, related to academic content, also better equips students for public purpose action. The types of shifts happening today – new educational philosophies and strategic frameworks, a focus on skill development, rethinking daily schedules, and redesign of “classrooms” – give schools the opportunity to align objectives more holistically across extra-, co- and core curricular areas. Such a reframing of education holds great potential for deeper learning and authentic youth engagement in civic and community life that prepare youth with skills to both thrive and to solve the challenges facing their world.

Appendix A**Essential Capacities For The 21st Century****1. Analytical and Creative Thinking and Problem-solving**

- Identify, manage, and address complex problems
- Detect bias and distinguish between reliable and unsound information
- Control information overload
- Formulate meaningful questions
- Analyze and create ideas and knowledge
- Use trial and error; devise and test solutions to problems
- Imagine alternatives
- Develop cross-disciplinary knowledge and perspectives
- Engage in sustained reasoning
- Synthesize and adapt
- Solve new problems that don't have rule-based solutions
- Use knowledge and creativity to solve complex "real-world" problems

2. Complex Communication—Oral and Written

- Understand and express ideas in two or more languages
- Communicate clearly to diverse audiences
- Listen attentively
- Speak effectively
- Write clearly and concisely—for a variety of audiences
- Explain information and compellingly persuade others of its implications

3. Leadership and Teamwork

- Initiate new ideas
- Lead through influence
- Build trust, resolve conflicts, and provide support for others
- Facilitate group discussions, forge consensus, and negotiate outcomes
- Teach, coach, and counsel others
- Enlist help
- Collaborate sensitively and productively with people of varied backgrounds
- Coordinate tasks, manage groups, and delegate responsibilities
- Implement decisions and meet goals
- Share the credit

4. Digital and Quantitative Literacy

- Understand, use, and apply digital technologies
- Create digital knowledge and media
- Use multimedia resources to communicate ideas effectively in a variety of formats
- Master and use higher-level mathematics
- Understand traditional and emerging topics in math, science, and technology—environmental sciences, robotics, fractals, cellular automata, nanotechnology, and biotechnology

5. Global Perspective

- Develop open-mindedness, particularly regarding the values and traditions of others

Appendix A (Continued)

Essential Capacities For The 21st Century

- Study and understand non-western history, politics, religion, and culture
- Develop facility with one or more international language
- Use technology to connect with people and events globally
- Develop social and intellectual skills to navigate effectively across cultures
- Use 21st century skills to understand and address global issues
- Learn from, and work collaboratively with, individuals from diverse cultures, religions, and lifestyles in a spirit of mutual respect and open dialogue
- Leverage social and cultural differences to create new ideas and achieve success

6. Adaptability, Initiative, and Risk-Taking

- Develop flexibility, agility, and adaptability
- Bring a sense of courage to unfamiliar situations
- Explore and experiment
- Work effectively in a climate of ambiguity and changing priorities
- View failure as an opportunity to learn, and acknowledge that innovation involves small successes and frequent mistakes

- Cultivate an independence of spirit to explore new roles, ideas, and strategies
- Develop entrepreneurial literacy
- Use creativity and innovation to produce things that are unique and that have value and meaning

7. Integrity and Ethical Decision-Making

- Sustain an empathetic and compassionate outlook
- Foster integrity, honesty, fairness, and respect
- Exhibit moral courage in confronting unjust situations
- Act responsibly, with the interests and well-being of the larger community in mind
- Develop a fundamental understanding of emerging ethical issues and dilemmas regarding new media and technologies
- Make reasoned and ethical decisions in response to complex problems

Source: NAIS Commission on Accreditation (2010). *A Guide to Becoming a School of the Future*, pp. 11-12. Washington, D.C.: National Association of Independent Schools.

Appendix B

Background Interview with School Administrator (or Public Purpose Staff)

1. Name:
2. Title:
3. Responsibilities:
4. What types of programs does your school have that promote a public good / public purpose, or educate students about societal issues and connect them with local and global communities?
5. What types of courses does your school offer for high school students that promote a public good / public purpose, or educate students about societal issues and connect them with local and global communities?
6. Have any of your (high) school's professional development opportunities and readings for faculty been focused on themes related to "21st century teaching and learning" and "21st century skills"? If so, what were the specific themes or topics covered? What books and authors were studied?
7. Are any themes or topics related to "21st century teaching and learning" and "21st century skills" a focus for incorporation into teaching approaches and curriculum design?
8. Have any of your (high) school's service, service learning or public purpose coordinators or directors attended conferences, participated in professional development workshops, or independently studied "21st century teaching and learning" and "21st century skills" related to their work? If so, what were the specific themes or topics covered?
9. Are any themes or topics related to "21st century teaching and learning" and "21st century skills" a focus for incorporation into service, service learning or public purpose activities in the classroom?
10. Are any themes or topics related to "21st century teaching and learning" and "21st century skills" a focus for incorporation into service, service learning or public purpose activities in co-curriculars, outside of the classroom?

Other Information to Gather from School Website, Publications or Interview

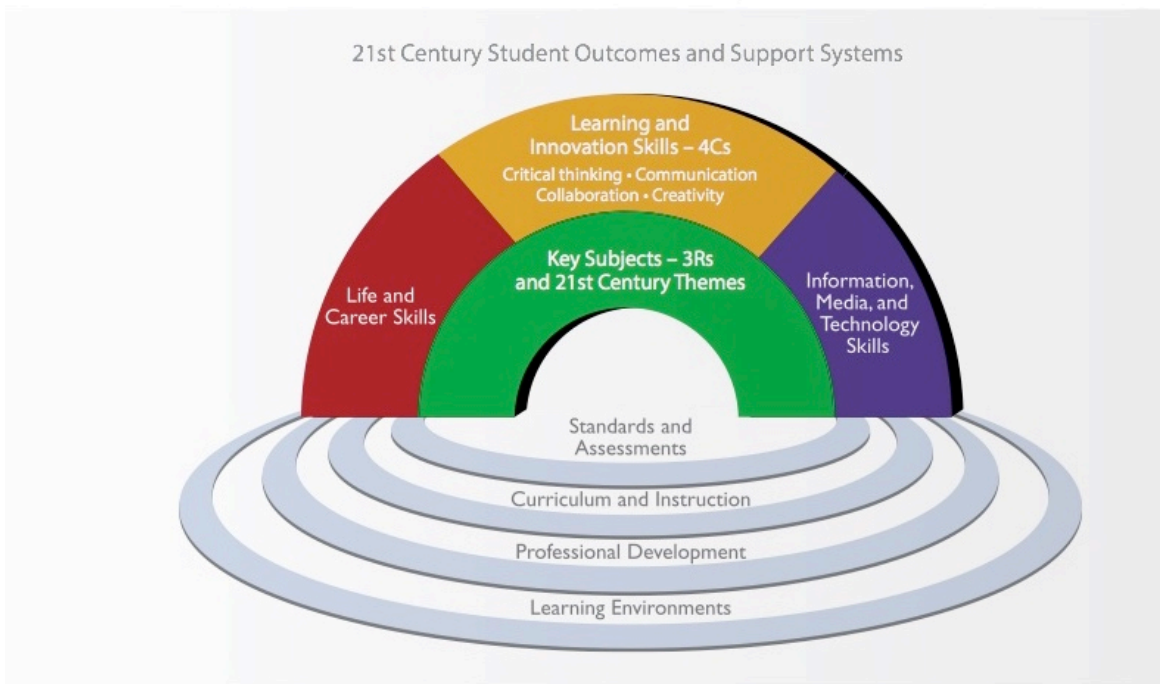
11. School name:
12. Size of student body:
13. Type of school (day or boarding and secular or religious):
14. Grade levels:

15. Annual tuition (for high school students):
16. Amount of financial aid awarded in 2014:
17. Endowment:
18. School mission statement:

Appendix C



The Partnership for 21st Century Learning (P21) has developed a vision for student success in the new global economy.



21ST CENTURY STUDENT OUTCOMES

To help practitioners integrate skills into the teaching of core academic subjects, P21 has developed a unified, collective vision for learning known as the Framework for 21st Century Learning. This Framework describes the skills, knowledge and expertise students must master to succeed in work and life; it is a blend of content knowledge, specific skills, expertise and literacies.

Every 21st century skills implementation requires the development of core academic subject knowledge and understanding among all students. Those who can think critically and communicate effectively must build on a base of core academic subject knowledge.

Within the context of content knowledge instruction, students must also learn the essential skills for success in today's world, such as critical thinking, problem solving, communication and collaboration.

When a school or district builds on this foundation, combining the entire Framework with the necessary support systems—standards, assessments, curriculum and instruction, professional development and learning environments—students are more engaged in the learning process and graduate better prepared to thrive in today's global economy.

Appendix C (continued)

Framework for 21st Century Learning

Key Subjects and 21st Century Themes

Mastery of key subjects and 21st century themes is essential to student success. Key subjects include English, reading or language arts, world languages, arts, mathematics, economics, science, geography, history, government and civics.

In addition, schools must promote an understanding of academic content at much higher levels by weaving 21st century interdisciplinary themes into core subjects:

- Global Awareness
- Financial, Economic, Business and Entrepreneurial Literacy
- Civic Literacy
- Health Literacy
- Environmental Literacy

Learning and Innovation Skills

Learning and innovation skills are what separate students who are prepared for increasingly complex life and work environments in today's world and those who are not. They include:

- Creativity and Innovation
- Critical Thinking and Problem Solving
- Communication and Collaboration

Information, Media and Technology Skills

Today, we live in a technology and media-driven environment, marked by access to an abundance of information, rapid changes in technology tools and the ability to collaborate and make individual contributions on an unprecedented scale. Effective citizens and workers must be able to exhibit a range of functional and critical thinking skills, such as:

- Information Literacy
- Media Literacy
- ICT (Information, Communications and Technology) Literacy

Life and Career Skills

Today's life and work environments require far more than thinking skills and content knowledge. The ability to navigate the complex life and work environments in the globally competitive information age requires students to pay rigorous attention to developing adequate life and career skills, such as:

- Flexibility and Adaptability
- Initiative and Self-Direction
- Social and Cross-Cultural Skills
- Productivity and Accountability
- Leadership and Responsibility

Source: Partnership for 21st Century Learning (2015). Framework for 21st Century Learning. Washington: Partnership for 21st Century Learning.

Appendix D

Survey for Teachers

“Measuring 21st Century Skill Development in Service Learning and Public Good Courses in Independent High Schools”

Introduction:

Thank you for your participation in this research! Your school was chosen to participate because it has invested resources in a variety of programs and activities that involve students in understanding social issues / needs and acting to benefit the local or global community.

Your course was identified by your school administrator for this study because your curriculum and experiences EITHER (a) involve students in nonprofit education, youth grantmaking or learning about and addressing community issues or needs; OR (b) engage students in service learning initiatives.

The Purpose of This Study:

This study intends to explore whether service learning and public good high school courses promote the development of 21st century skills in students.

Instructions:

This survey asks about your teaching practices in your course that might promote the development of the following 21st century skills in your students:

1. Critical Thinking Skills
2. Collaboration Skills
3. Communication Skills
4. Creativity And Innovation Skills
5. Self-Direction Skills
6. Global Connections
7. Local Connections
8. Use of Technology As A Tool For Learning

There are no correct or incorrect answers.

After taking this survey, we ask that you administer the complementary student survey to the students in your course.

Your individual responses and those of your students will be kept confidential but the collated data from all participating schools will be shared with you and your administrator.

[The source for this list of 21st century skills and the adapted surveys is Hixson, N., Ravitz, J. & Whisman, A. (2012). *Extended professional development in project-based learning: Impacts on 21st century teaching and student achievement*. Charleston, WV: West Virginia Department of Education.]

**INDIANA UNIVERSITY INFORMED CONSENT STATEMENT FOR
“Measuring 21st Century Skill Development in Service Learning and Public Good Courses in Independent High Schools”**

You are invited to participate in this research study that seeks to understand whether high school courses that engage students in service learning or exploring and addressing community issues also help develop students’ “21st century skills.” Your school was selected as a possible participant because of its commitment to fostering in students an interest in social responsibility and the good of the local and global communities.

The study is being conducted by Luana Nissan of Indiana University’s Lilly Family School of Philanthropy.

Study Purpose:

This study intends to explore whether courses that utilize the service learning method or have a public good-orientation promote the development of 21st century skills in high school students in independent (private) schools.

Number Of People Taking Part In The Study:

If you agree to participate, you will be one of 10-20 teachers who will be participating in this research. Teachers will provide a context about classroom practices and objectives for the responses received by the larger number of student survey participants (120-250).

Procedures For The Study:

If you agree to be in the study, you will do the following things:

1. Select “yes” under the “Teacher’s Consent” section below and provide your electronic signature and date.
2. Complete the survey questions that follow. You will have 30 minutes to answer the questions.

Risks of Taking Part in this Study:

The risks of taking part in this study are minimal. A possible risk of completing the survey is discomfort with answering the questions. To minimize this risk, if you become uncomfortable while taking the survey, refrain from completing it.

Benefits of Taking Part in this Study:

A school’s participation will allow the school and participating teachers to receive collated data across participating schools that will provide a basic understanding about whether service learning and public good courses are one way schools can build students’ 21st century skills.

Confidentiality for Participants:

The individual responses of teachers that participate by completing the online survey instrument will be kept confidential. In fact, neither you, as the teacher, nor your school administration will receive individual teacher or student responses. The collated data from all participating schools will be shared with the teachers participating in the study and the school administrators.

Organizations that may inspect and/or copy these research records for quality assurance and data analysis include groups such as the study principal researcher and the Indiana University Institutional Review Board or its designees.

Contacts For Questions Or Problems:

For questions about the study, contact the researcher, Luana Nissan at xxx-xxx-xxxx. If you cannot reach her, please call the Indiana University Human Subjects Office at 317-278-3458 during regular business hours (i.e., 8 a.m. to 5 p.m. Eastern).

For questions about your rights as a research participant, to discuss problems or concerns about a study, or to obtain information or offer input, contact IU Human Subjects Office at 317-278-3458.

Voluntary Nature Of This Study:

Taking part in this study is voluntary. You may choose not to take part or may leave the study at any time.

Your participation may be terminated by the researcher without consent if the timeframe for the study has passed. This would occur if surveys have not been completed by November 12, 2015.

TEACHER'S CONSENT

In consideration of all of the above, I choose:

_____ YES, I give my consent to take part in this study and I WILL complete this online survey.

_____ NO, I do not give my consent to take part in this study and I WILL NOT complete this online survey.

If I have agreed to participate, I will be sent a copy of an informed consent document to keep for my records after completion of the online teacher survey.

Teacher's Signature: _____ **Date:** _____
(must be dated by the teacher)

COURSE BACKGROUND

1. Please share the category under which you will be answering all the questions that follow in this survey (SELECT ONE).

_____ (1) My course involves students in **nonprofit education, youth grantmaking or learning about and addressing community issues or needs**. *NOTE: If your course meets this category description but also incorporates service learning, please select this category 1 and tailor your responses to reflect practices across your entire course.*

_____ (2) My course incorporates one or more **service learning*** initiatives as one teaching method to engage students. *NOTE: If your course meets this category description, please tailor your responses to only reflect the service learning portion(s) of your course.*

***We define service learning** as a “course-based, credit bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs, and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility” (Bringle & Hatcher, 2009, p. 38)].

2. IF category #2 above is chosen (i.e., Service Learning is used in my course), please choose the best answer below to the following question:
How long, in total weeks did the service learning portion of your course encompass?

_____ 1-2 Weeks

_____ 3-4 Weeks

_____ More than a month

_____ It is infused across one semester or year

CRITICAL THINKING SKILLS refer to students being able to analyze complex problems, investigate questions for which there are no clear-cut answers, evaluate different points of view or sources of information, and draw appropriate conclusions based on evidence and reasoning.

1. The choices below are examples of practices that may help students learn CRITICAL THINKING SKILLS.

In your teaching of your TARGET COURSE, how often have you asked students to do the following	Not relevant for this course	Almost never	2-3 times	4-6 times	Almost daily
a. Compare information from different sources before completing a task or assignment?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Draw their own conclusions based on analysis of numbers, facts, or relevant information?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Summarize or create their own interpretation of what they have read or been taught?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Analyze competing arguments, perspectives or solutions to a problem?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Develop a persuasive argument based on supporting evidence or reasoning?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Try to solve complex problems or answer questions that have no single correct solution or answer?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. To what extent do you agree with these statements about your TARGET COURSE?	Not relevant for this course	Not really	To a minor extent	To a moderate extent	To a great extent
a. I have tried to develop students' critical thinking skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Most students have learned critical thinking skills while in my course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. I have been able to effectively assess students' critical thinking skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

COLLABORATION SKILLS refer to students being able to work together to solve problems or answer questions, to work effectively and respectfully in teams to accomplish a common goal and to assume shared responsibility for completing a task.

1. The choices below are examples of practices that may help students learn COLLABORATION SKILLS.

In your teaching of your TARGET COURSE, how often have you asked students to do the following	Not relevant for this course	Almost never	2-3 times	4-6 times	Almost daily
a. Work in pairs or small groups to complete a task together?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Work with other students to set goals and create a plan for their team?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Create joint products using contributions from each student?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Present their group work to the course, teacher or others?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Work as a team to incorporate feedback on group tasks or products?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Give feedback to peers or assess other students' work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. To what extent do you agree with these statements about your TARGET COURSE?	Not relevant for this course	Not really	To a minor extent	To a moderate extent	To a great extent
a. I have tried to develop students' collaboration skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Most students have learned collaboration skills while in my course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. I have been able to effectively assess students' collaboration skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

COMMUNICATION SKILLS refer to students being able to organize their thoughts, data and findings and share these effectively through a variety of media, as well as orally and in writing.

1. The choices below are examples of practices that may help students learn **COMMUNICATION SKILLS**.

In your teaching of your TARGET COURSE , how often have you asked students to do the following	Not relevant for this course	Almost never	2-3 times	4-6 times	Almost daily
a. Structure data for use in written products or oral presentations (e.g., creating charts, tables or graphs)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Convey their ideas using media other than a written paper (e.g., posters, video, blogs, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Prepare and deliver an oral presentation to the class, teacher or others?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Answer questions in front of an audience?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Decide how they will present their work or demonstrate their learning?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. To what extent do you agree with these statements about your TARGET COURSE ?	Not relevant for this course	Not really	To a minor extent	To a moderate extent	To a great extent
a. I have tried to develop students' communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Most students have learned communication skills while in my course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. I have been able to effectively assess students' communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

CREATIVITY AND INNOVATION SKILLS refer to students being able to generate and refine solutions to complex problems or tasks based on synthesis, analysis and then combining or presenting what they have learned in new and original ways.

1. The choices below are examples of practices that may help students learn CREATIVITY AND INNOVATION SKILLS.

In your teaching of your TARGET COURSE, how often have you asked students to do the following	Not relevant for this course	Almost never	2-3 times	4-6 times	Almost daily
a. Use idea creation techniques such as brainstorming or concept mapping?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Generate their own ideas about how to confront a problem or question?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Test out different ideas and work to improve them?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Invent a solution to a complex, open-ended question or problem?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Create an original product or performance to express their ideas?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. To what extent do you agree with these statements about your TARGET COURSE?	Not relevant for this course	Not really	To a minor extent	To a moderate extent	To a great extent
a. I have tried to develop students' creativity and innovation skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Most students have learned creativity and innovation skills while in my course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. I have been able to effectively assess students' creativity and innovation skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

SELF-DIRECTION SKILLS refer to students being able to take responsibility for their learning by identifying topics to pursue and processes for their own learning, and being able to review their own work and respond to feedback.

1. The choices below are examples of practices that may help students learn SELF-DIRECTION SKILLS.

In your teaching of your TARGET COURSE, how often have you asked students to do the following	Not relevant for this course	Almost never	2-3 times	4-6 times	Almost daily
a. Take initiative when confronted with a difficult problem or question?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Choose their own topics of learning or questions to pursue?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Plan the steps they will take to accomplish a complex task?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Choose for themselves what examples to study or resources to use?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Monitor their own progress towards completion of a complex task and modify their work accordingly?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Use specific criteria to assess the quality of their work before it is completed?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Use peer, teacher or expert feedback to revise their work?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. To what extent do you agree with these statements about your TARGET COURSE?	Not relevant for this course	Not really	To a minor extent	To a moderate extent	To a great extent
a. I have tried to develop students' self-direction skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Most students have learned self-direction skills while in my course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. I have been able to effectively assess students' self-direction skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

GLOBAL CONNECTIONS refers to students being able to understand global, geo-political issues including awareness of geography, culture, language, history, and literature from other countries.

1. The choices below are examples of practices that may help students learn to make GLOBAL CONNECTIONS.

In your teaching of your TARGET COURSE, how often have you asked students to do the following	Not relevant for this course	Almost never	2-3 times	4-6 times	Almost daily
a. Study information about other countries or cultures?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Use information or ideas that come from people in other countries or cultures?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Discuss issues related to global interdependency (for example, global environment trends, global market economy)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Understand the life experiences of people in cultures besides their own?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Study the geography of distant countries?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Reflect on how their own experiences and local issues are connected to global issues?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. To what extent do you agree with these statements about your TARGET COURSE?	Not relevant for this course	Not really	To a minor extent	To a moderate extent	To a great extent
a. I have tried to develop students' skills in making global connections	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Most students have learned to make global connections while in my course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. I have been able to effectively assess students' skills in making global connections	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

LOCAL CONNECTIONS refers to students being able to apply what they have learned to local contexts and community issues.

1. The choices below are examples of practices that may help students learn to make LOCAL CONNECTIONS.

In your teaching of your TARGET COURSE , how often have you asked students to do the following	Not relevant for this course	Almost never	2-3 times	4-6 times	Almost daily
a. Investigate topics or issues that are relevant to their family or community?	0	0	0	0	0
b. Apply what they are learning to local situations, issues or problems?	0	0	0	0	0
c. Talk to one or more members of the community about a course project or activity?	0	0	0	0	0
d. Analyze how different stakeholder groups or community members view an issue?	0	0	0	0	0
e. Respond to a question or task in a way that weighs the concerns of different community members or groups?	0	0	0	0	0
2. To what extent do you agree with these statements about your TARGET COURSE?	Not relevant for this course	Not really	To a minor extent	To a moderate extent	To a great extent
a. I have tried to develop students' skills in making local connections	0	0	0	0	0
b. Most students have learned to make local connections while in my course	0	0	0	0	0
c. I have been able to effectively assess students' skills in making local connections	0	0	0	0	0

USING TECHNOLOGY AS A TOOL FOR LEARNING refers to students being able to manage their learning and produce products using appropriate information and communication technologies

1. The choices below are examples of practices that may help students learn to USE TECHNOLOGY as a TOOL FOR LEARNING.

In your teaching of your TARGET COURSE, how often have you asked students to do the following	Not relevant for this course	Almost never	2-3 times	4-6 times	Almost daily
a. Use technology or the Internet for self-instruction (e.g., Kahn Academy or other videos, tutorials, self-instructional websites, etc.)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Select appropriate technology tools or resources for completing a task?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Evaluate the credibility and relevance of online resources?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Use technology to analyze information (e.g., databases, spreadsheets, graphic programs, etc.)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Use technology to help them share information (e.g., multi-media presentations using sound or video, presentation software, blogs, podcasts, etc.)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Use technology to support teamwork or collaboration (e.g., shared work spaces, email exchanges, giving and receiving feedback, etc.)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Use technology to interact directly with experts or members of local/global communities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Use technology to keep track of their work on extended tasks or assignments?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. To what extent do you agree with these statements about your TARGET COURSE?	Not relevant for this course	Not really	To a minor extent	To a moderate extent	To a great extent
a. I have tried to develop students' skills in using technology as a tool for learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Most students have learned to use technology as a tool for learning while in my course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. I have been able to effectively assess students' skills in using technology for learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix E

Survey for Students

“Measuring 21st Century Skill Development in Service Learning and Public Good Courses in Independent High Schools”

Introduction:

Thank you for participating in this research! Your school was chosen for this study because it offers programs and activities for students to learn about social issues and needs and to take action to benefit the local or global community.

The Purpose of This Study:

This study intends to explore whether service learning and public good high school courses promote the development of 21st century skills in students.

Instructions:

This survey asks about teaching practices in your course that might promote the development of the following 21st century skills in students:

1. Critical Thinking Skills
2. Collaboration Skills
3. Communication Skills
4. Creativity And Innovation Skills
5. Self-Direction Skills
6. Global Connections
7. Local Connections
8. Use of Technology As A Tool For Learning

There are no correct or incorrect answers.

Your individual responses will be confidential (even from your teacher) but the collective data from all the participating schools will be shared with your teacher and school administrator.

[The source for this list of 21st century skills and the adapted surveys is Hixson, N., Ravitz, J. & Whisman, A. (2012). *Extended professional development in project-based learning: Impacts on 21st century teaching and student achievement*. Charleston, WV: West Virginia Department of Education.]

Indiana University Assent to Participate in Research
“Measuring 21st Century Skill Development in Service Learning and Public Good Courses in Independent High Schools”

We are doing this research study because we are trying to understand whether high school courses that engage students in service learning or exploring community issues and addressing these issues also help develop students’ “21st century skills.” Studies like this are meant to increase understanding in the field of education and improve teaching practices.

Why you are being asked to participate in this study?

Your feedback is important. By sharing what you have learned and experienced in this course through an online survey, you will help us answer the question we are studying.

What will happen during this research study?

If you want to participate in this study, we ask you to:

1. Select “yes” under the “MY CHOICE” section below and provide your electronic signature and date.
2. Complete the survey questions that follow. You will have 30 minutes to answer the questions.

Are there any risks of participating in this study?

Sometimes studies have “risks.” The risks of participating in this study might be that you feel uncomfortable with answering questions. If you become uncomfortable, please let your teacher know and do not complete the survey.

Who can you ask if you have questions?

Please ask your teacher if you have any questions about this study.

What if you don’t want to be in the study?

Participation is voluntary. If you don’t want to participate, choose “no” in the section below.

MY CHOICE:

____ YES, I choose to participate in this study by completing this survey.

____ NO, I do not choose to participate in this study and will not complete this survey.

If you choose “YES” then please provide your electronic signature and date on the lines below.

Student’s signature

Date

COURSE BACKGROUND

1. Please SELECT the category below **identified by your teacher** that best describes your course.

_____ (1) This course teaches us about **nonprofit education, youth grantmaking or learning about and addressing community issues or needs**.

_____ (2) This course incorporates **service learning*** initiatives / projects.

* **Service learning** is a “course-based, credit bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs, and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility” (Bringle & Hatcher, 2009, p. 38)].

CRITICAL THINKING SKILLS refer to students being able to analyze complex problems, investigate questions for which there are no clear-cut answers, evaluate different points of view, evaluate different sources of information, and use evidence and reasoning to draw appropriate conclusions.

1. The choices below are classroom practices that may help you learn CRITICAL THINKING SKILLS.

In your COURSE, how often have you been asked to do the following	Not relevant for this course	Almost never	2-3 times	4-6 times	Almost daily
a. Compare information from different sources before completing a task or assignment?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Draw your own conclusions based on analysis of numbers, facts, or relevant information?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Summarize or create your own interpretation of what you have read or been taught?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Analyze competing arguments, perspectives or solutions to a problem?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Develop a persuasive argument based on supporting evidence or reasoning?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Try to solve complex problems or answer questions that have no single correct solution or answer?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. To what extent do you agree with these statements?

	Not relevant for this course	Not really	To a minor extent	To a moderate extent	To a great extent
a. My teacher has tried to develop my critical thinking skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. I feel that I have learned critical thinking skills while in this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

COLLABORATION SKILLS refer to students being able to work together to solve problems or answer questions, to work effectively and respectfully in teams to accomplish a common goal and to assume shared responsibility for completing a task.

1. The choices below are classroom practices that may help you learn **COLLABORATION SKILLS**.

In your COURSE , how often have you been asked to do the following	Not relevant for this course	Almost never	2-3 times	4-6 times	Almost daily
a. Work in pairs or small groups to complete a task together?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Work with other students to set goals and create a plan for your team?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Create joint products using contributions from each student?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Present your group work to the class, teacher or others?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Work as a team to incorporate feedback on group tasks or products?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Give feedback to peers or assess other students' work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. To what extent do you agree with these statements?	Not relevant for this course	Not really	To a minor extent	To a moderate extent	To a great extent
a. My teacher has tried to develop my collaboration skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. I feel that I have learned collaboration skills while in this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

COMMUNICATION SKILLS refer to students being able to organize their thoughts, data and findings and share these effectively through a variety of media, as well as orally and in writing.

1. The choices below are classroom practices that may help you learn COMMUNICATION SKILLS.

In your COURSE, how often have you been asked to do the following	Not relevant for this course	Almost never	2-3 times	4-6 times	Almost daily
a. Structure data for use in written products or oral presentations (for example, creating charts, tables or graphs)?	0	0	0	0	0
b. Convey your ideas using media but NOT in the form of a written paper (for example, posters, video, blogs, etc.)	0	0	0	0	0
c. Prepare and deliver an oral presentation to the class, teacher or others?	0	0	0	0	0
d. Answer questions in front of an audience?	0	0	0	0	0
e. Decide how you will present your work or demonstrate your learning?	0	0	0	0	0

2. To what extent do you agree with these statements?	Not relevant for this course	Not really	To a minor extent	To a moderate extent	To a great extent
a. My teacher has tried to develop my communication skills	0	0	0	0	0
b. I feel that I have learned communication skills while in this course	0	0	0	0	0

CREATIVITY AND INNOVATION SKILLS refer to students being able to generate and refine solutions to complex problems or tasks based on synthesis, analysis and then combining or presenting what they have learned in new and original ways.

1. The choices below are classroom practices that may help you learn CREATIVITY AND INNOVATION SKILLS.

In your COURSE, how often have you been asked to do the following	Not relevant for this course	Almost never	2-3 times	4-6 times	Almost daily
a. Use idea creation techniques such as brainstorming or concept mapping?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Generate your own ideas about how to confront a problem or question?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Test out different ideas and work to improve them?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Invent a solution to a complex, open-ended question or problem?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Create an original product or performance to express your ideas?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. To what extent do you agree with these statements?	Not relevant for this course	Not really	To a minor extent	To a moderate extent	To a great extent
a. My teacher has tried to develop my creativity and innovation skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. I feel that I have learned creativity and innovation skills while in this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

SELF-DIRECTION SKILLS refer to students being able to take responsibility for their learning by identifying topics to pursue and processes for their own learning, and being able to review their own work and respond to feedback.

1. The choices below are classroom practices that may help you learn SELF-DIRECTION SKILLS.

In your COURSE, how often have you been asked to do the following	Not relevant for this course	Almost never	2-3 times	4-6 times	Almost daily
a. Take initiative when confronted with a difficult problem or question?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Choose your own topics of learning or questions to pursue?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Plan the steps you will take to accomplish a complex task?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Choose for yourself what examples to study or resources to use?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Monitor your own progress towards completion of a complex task and modify your work accordingly?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Use specific criteria to assess the quality of your work before it is completed?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Use peer, teacher or expert feedback to revise your work?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. To what extent do you agree with these statements?	Not relevant for this course	Not really	To a minor extent	To a moderate extent	To a great extent
a. My teacher has tried to develop my self-direction skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. I feel that I have learned self-direction skills while in this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

GLOBAL CONNECTIONS refers to students being able to understand global, geo-political issues including awareness of geography, culture, language, history, and literature from other countries.

1. The choices below are classroom practices that may help you learn to make GLOBAL CONNECTIONS.

In your COURSE, how often have you been asked to do the following	Not relevant for this course	Almost never	2-3 times	4-6 times	Almost daily
a. Study information about other countries or cultures?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Use information or ideas that come from people in other countries or cultures?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Discuss issues related to global interdependency (for example, global environment trends, global market economy)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Understand the life experiences of people in cultures beside your own?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Study the geography of distant countries?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Reflect on how your own experiences and local issues are connected to global issues?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. To what extent do you agree with these statements?

	Not relevant for this course	Not really	To a minor extent	To a moderate extent	To a great extent
a. My teacher has tried to develop my skills in making global connections	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. I feel that I have learned to make global connections while in this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

LOCAL CONNECTIONS refers to students being able to apply what they have learned to local contexts and community issues.

1. The choices below are classroom practices that may help you learn to make LOCAL CONNECTIONS.

In your COURSE, how often have you been asked to do the following	Not relevant for this course	Almost never	2-3 times	4-6 times	Almost daily
a. Investigate topics or issues that are relevant to your family or community?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Apply what you are learning to local situations, issues or problems?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Talk to one or more members of the community about a course project or activity?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Analyze how different stakeholder groups or community members view an issue?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Respond to a question or task in a way that weighs the concerns of different community members or groups?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. To what extent do you agree with these statements?	Not relevant for this course	Not really	To a minor extent	To a moderate extent	To a great extent
a. My teacher has tried to develop my skills in making local connections	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. I feel that I have learned to make local connections while in this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

USING TECHNOLOGY AS A TOOL FOR LEARNING refers to students being able to manage their learning and produce products using appropriate information and communication technologies

1. The choices below are classroom practices that may help you learn to USE TECHNOLOGY as a TOOL FOR LEARNING.

In your COURSE, how often have you been asked to do the following	Not relevant for this course	Almost never	2-3 times	4-6 times	Almost daily
a. Use technology or the Internet for self-instruction (e.g., Kahn Academy or other videos, tutorials, self-instructional websites, etc.)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Select appropriate technology tools or resources for completing a task?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Evaluate the credibility and relevance of online resources?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Use technology to analyze information (e.g., databases, spreadsheets, graphic programs, etc.)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Use technology to help you share information (e.g., multi-media presentations using sound or video, presentation software, blogs, podcasts, etc.)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Use technology to support teamwork or collaboration (e.g., shared work spaces, email exchanges, giving and receiving feedback, etc.)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Use technology to interact directly with experts or members of the local/global communities?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Use technology to keep track of your work on extended tasks or assignments?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Not relevant for this course	Not really	To a minor extent	To a moderate extent	To a great extent
2. To what extent do you agree with these statements?					
a. My teacher has tried to develop my skills in using technology as a tool for learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. I feel that I have learned to use technology as a tool for learning while in this course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix F

Recruitment Email for School Participation in Study

Dear _____ (school administrator / public purpose program staff),

I am writing to invite you to participate in a study to explore whether courses that use the service learning method or teach high school students to understand and address issues in local and global communities promote the development of 21st century skills.

I believe this particular connection has not yet been intentionally explored through research and that independent schools would be very interested in lessons learned from exploring a potential link. Your school was chosen because it is known for a focus on public purpose and because you offer courses and programs through which students explore social issues and contribute to the local and global communities.

Participation in this study involves a minimal time commitment on your part and on the part of faculty that you recruit to participate. What we ask of your school in order to participate in this study and to receive our findings is:

1. Your participation in a telephone interview that will take no longer than one hour and will provide general background information about your school and its public purpose activities.
2. Your recruitment of the faculty of 3-4 high school courses that represent both types of courses described below:
 - A course that teaches nonprofit education, youth grantmaking or understanding and action to address community issues or needs.
 - A course that incorporates service learning initiatives / projects.
3. Completion of a 30-minute online survey by faculty and their students in a classroom setting under quiet conditions (like students experience taking a test).

In order for your school to participate, all student and teacher surveys will need to be completed no later than November 12, 2015.

Attached please find a “Study Information Sheet” that will provide a good overview of purpose, procedures, risks and benefits for participation. Please share this sheet with the school leader who would decide on your school’s participation in this study.

I will contact you in a few days to answer any questions and to see if you would like to participate in our study to further our understanding about the impact of educational opportunities like your courses on student development.

Many thanks for your consideration!

Luana Nissan

Lilly Family School of Philanthropy, Indiana University-Purdue University Indianapolis

xxx-xxx-xxxx

Appendix G

Study Information Sheet Measuring 21st Century Skill Development in Service Learning and Public Good Courses in Independent High Schools

You are invited to participate in a research study that seeks to understand whether high school courses that engage students in service learning or exploring and addressing community issues also help develop students' "21st century skills." Your school was selected as a possible participant because of its commitment to fostering in students an interest in social responsibility and the good of the local and global communities. *Please read this form and ask any questions you may have before agreeing to be in the study.*

The study is being conducted by Luana Nissan of Indiana University's Lilly Family School of Philanthropy.

OVERVIEW

Study Purpose:

This study intends to explore whether courses that utilize the service learning method or have a public good-orientation promote the development of 21st century skills in high school students in independent (private) schools.

What is Being Measured:

Teaching practices that support...

1. Critical Thinking Skills
2. Collaboration Skills
3. Communication Skills
4. Creativity And Innovation Skills
5. Self-Direction Skills
6. Global Connections
7. Local Connections
8. Use of Technology As A Tool For Learning

Background of Schools Participating in this Study:

If you agree to participate, your school will join up to five independent schools in this study. Each school has invested human and financial resources in a variety of programs and activities (in the classroom and out-of-class) that involve students in service learning and in understanding social issues / needs and acting to benefit the local or global community. Each school has gained a reputation for this type of programming and has made colleagues and other schools aware of their work through current strategic plans, national conference presentations, *Independent School* magazine articles, and / or recognitions like Edward E. Ford Foundation grant awards.

In particular, the independent schools participating in this study meet the following criteria. Each selected school:

- Is either a self-contained high school or a kindergarten through 12th grade school
- Is an independent (that is, private and not-for-profit) school
- Exhibits an expressed commitment to fostering in their students an interest in their communities, social responsibility or the public good; this is evident in language used in the school's mission statement, philosophy statement, "portrait of a graduate" and / or graduation requirements
- Has one or more dedicated programs that encompass community service, service learning, public-private partnerships, public purpose, civic engagement, and/or philanthropy education; the program must offer activities for students
- Offers one or more high school courses (elective or required) with a public good focus – these courses engage students in nonprofit education, youth grantmaking or learning about and addressing issues in the local or global communities
- Offers one or more high school courses (elective or required) that involve students in a service learning initiative or project
- Employs at least one staff person whose position title and responsibilities encompass working with students in the areas of community service, service learning, public-private partnerships, public purpose, civic engagement, and/or philanthropy education

PROCEDURES FOR THE STUDY

Responsibilities of School Participants:

As a participant in this study, you are asked to do the following things:

4. Participation by your program director / staff member _____ in a telephone interview that will take no longer than one hour and will provide the researcher with general background information about your school and its public purpose activities.
5. Recruitment by your program director / staff member _____ of the faculty of 3-4 high school courses (in total) that together represent both types of courses described below:
 - A high school course that teaches nonprofit education, youth grantmaking or understanding and action to address community issues or needs
 - A course that incorporates service learning initiatives / projects
6. Completion of a 30-minute online survey by these faculty and their students in a classroom setting under quiet conditions similar to those students experience while taking a test. The surveys will need to be administered and completed by November 12, 2015 in order to be included in this study.

Risks of Taking Part in this Study:

The risks of taking part in this study are minimal. A possible risk of completing the survey is discomfort with answering the questions. To minimize this risk, if a student or teacher becomes uncomfortable while taking the survey, he or she may refrain from completing it.

The surveys ask no personal information of students or teachers and are focused on students' and teachers' assessment of common classroom teaching practices. Neither the teacher nor school administration will receive individual student or teacher responses. When the data from all schools is collated and analyzed, we will share collated results with each teacher and with the school administrator serving as our contact.

Benefits of Taking Part in this Study:

A school's participation will allow the school to receive collated data across participating schools that may provide a basic understanding about whether these types of courses are one way schools can build students' 21st century skills.

Confidentiality for Participants and Institutions:

The individual responses of teachers and students that participate by completing the online survey instrument will be kept confidential. The collated data from all participating schools will be shared with the teachers participating in the study and their school administrators. These administrators will serve as the researcher's school contact, recruiter of teachers for the study, and participant in a background interview by phone with the researcher.

Interviews with each school administrator will provide only background information on the school and its programs to help build a portrait of the school to be included in this study. *In the thesis document, compiled notes, interviews, and information analysis, the schools' names will be changed and identification of administrator names will be removed. In other words, participating schools will NOT be identified by name.* This information will be archived in the researchers' files for future reference.

Organizations that may inspect and/or copy these research records for quality assurance and data analysis include groups such as the study principal investigator and the Indiana University Institutional Review Board or its designees.

CONTACTS FOR QUESTIONS OR PROBLEMS

For questions about the study, contact the researcher, Luana Nissan at xxx-xxx-xxxx. If you cannot reach her, please call the Indiana University Human Subjects Office at 317-278-3458 during regular business hours (i.e., 8 a.m. to 5 p.m. Eastern).

For questions about your rights as a research participant, to discuss problems or concerns about a study, or to obtain information or offer input, contact IU Human Subjects Office at 317-278-3458.

VOLUNTARY NATURE OF THIS STUDY

Taking part in this study is voluntary. Your school may choose not to take part or may leave the study at any time.

Your school's participation may be terminated by the researcher without consent if the timeframe for the study has passed. This would occur if surveys have not been completed by November 12, 2015.

Appendix H

Emails for School Administrator and Participating Teachers (With accompanying surveys, instructions and parental letter)

SUBJECT: Email and Surveys for Teachers in 21st Century Skills Study

Dear _____ (school administrator of a public good program)

We greatly appreciate your help recruiting and communicating with faculty that are willing to complete a survey and have their students complete a survey about the teaching practices they utilize in their service learning or public good-oriented courses.

Below is the text for an email to pass along to participating teachers. Accompanying the email please include the two attached documents. The first document is a brief instruction sheet for administering and completing both the student and teacher surveys. The second is a "Letter to Inform Parents / Guardians of Student Survey Participation" which you or the teacher may decide you would like to share with parents before students are asked to complete the survey. These surveys are anonymous, asking no personal information of students or teachers, and would be considered "minimal risk" participation.

Please note that this study is time-sensitive. We are asking that your colleagues take the teacher survey and administer the student survey **no later than November 12** in order for their input to be included in the study. After November 12, 2015 we will collate and analyze the results from participating schools. If you have questions or teachers contact you with questions, you can reach me at any time at my number below. Thank you for your support!

Luana Nissan

xxx-xxx-xxxx

SUBJECT: Online Survey Links & Instructions for 21st Century Skills Study

Dear colleague,

As _____ (school administrator) shared with you, the surveys that you have agreed to take and to ask your students to take were created to explore whether there are connections between 1) courses that incorporate the service learning method or have a public-good orientation AND 2) the development of "21st century skills" in high school students. Your school has a demonstrated commitment to service and youth engagement in community, and your course is a part of your school's offerings in this area. Thank you for helping to further understanding in our field!

Attached is a brief instruction sheet explaining how to: 1) administer the online student survey, and 2) complete the teacher survey. Embedded in the instructions sheet are the links to both online surveys. Also attached is a "Letter to Inform Parents" that you may choose (or your administrator may request) to send along to parents before administering the survey to your students.

These surveys are anonymous, asking no personal information of students or teachers, and would be considered "minimal risk" participation. Neither you nor your school administration will receive individual student or teacher responses. Rather, when the data from all schools is collated and analyzed, we will share the collated results with you and your school administrator.

If you have any questions regarding this survey, please contact your administrator.

Thanks very much for your contribution to our knowledge about the impact of educational opportunities like your course on student development.

With regards and thanks,

Luana Nissan
Philanthropic Studies graduate student, Indiana University-Purdue University
Indianapolis

Appendix I:

Instructions for Administering and Completing the “21st Century Skills” Surveys

Please complete the teacher survey before administering the student survey to your students. This will allow you to become familiar with the questions that closely resemble questions on the student survey.

Instructions for Administering the “21st Century Skills Survey for Students”

Please read the directions below before beginning to administer the survey with your students.

1. If you would like, or your school administrator requests, inform parents of students in your designated course about their participation in the student survey by sending, via email, the “Letter to Inform Parents of Student Survey Participation” you received. Send this parent notice two or three days in advance of administering the survey.
2. Before students sit to take the survey, send them an email containing the following student survey link: <http://goo.gl/forms/h4rKoMu3fz>
3. To begin taking the survey, ask students to open their email and to click on the link to the student survey.
4. Looking at the first page of the survey online, read the “Introduction,” “Study Purpose” and “Instructions” sections with the class.
5. Ask your students to read the next page, “Assent to Participate” and to either choose to participate by clicking “yes” and providing their electronic signature (on the subsequent page) OR to click “no” if they are not agreeing to participate. Those who agree can go on to complete the survey. The survey will close for those students who choose “no.” *Please explain to students who agree to participate and provide their signature that their responses will go directly to the researcher who will collate all students’ responses across all participating schools. Their individual responses will be kept confidential and not shared with school staff.*
6. Please tell your students the answer to the first survey question (“Course Background”), which asks your course type – see explanation on the survey page.
7. Allow students 30 minutes to complete the survey. Ensure a typical, quiet test-taking environment occurs in the classroom during the survey time.
8. Please thank your students on our behalf, for adding to the understanding about educational practices in service learning and public good high school courses.

9. Please send your school administrator an email confirming that you have had the students in your designated course complete their survey. *If you are administering the survey to multiple courses, please send an email at the end of each survey administered, noting which course has completed the survey.*

Thank you for your help!

Note: For a teacher or school administrator who will be administering the survey to students who enrolled in and completed a course during the summer of 2015, please utilize a classroom setting, on-campus, and follow the same instructions listed above.

Instructions for Completing the “21st Century Skills Survey for Teachers”

Please read the directions below before beginning to take the survey.

1. To begin, click on the following link to the teacher survey:
<http://goo.gl/forms/Mp4nyyHbAz>
2. Read the “Introduction,” “Study Purpose” and “Instructions” sections located on the first page of your online survey.
3. Read the next page, “Informed Consent” and either choose to participate by clicking “yes” and providing your electronic signature OR click “no” if you are not agreeing to participate. If you agree, please go on to complete the teacher survey. The survey will close if you choose “no.”
4. Take up to 30 minutes to complete the survey during a quiet, uninterrupted time.
5. Please send your school administrator an email confirming that you have completed the teacher survey (and noting your course name if you are administering and taking surveys for more than one course).

Thank you for your help! You have added to our understanding about educational practices in service learning and public good high school courses.

** If you are administering the survey to students in different courses (not different sections of the same course), please answer a survey for each distinctive course about the particular objectives and approaches you take within that given course.*

Appendix J

Letter to Inform Parents / Guardians of Student Survey Participation

Dear parent,

Our school was invited to participate in a study this fall 2015 that will explore whether service learning and public good-oriented high school courses promote the development of “21st century skills” in students. This study is being conducted by a researcher at Indiana University’s Lilly Family School of Philanthropy. The specific skills that are being studied include:

1. Critical Thinking Skills
2. Collaboration Skills
3. Communication Skills
4. Creativity And Innovation Skills
5. Self-Direction Skills
6. Global Connections
7. Local Connections
8. Use of Technology As A Tool For Learning

Our school was selected because we are known for our commitment to encouraging community engagement in students and because we offer courses and programs through which students can explore social issues and contribute to their local and global communities.

Your son or daughter will participate in this study by anonymously answering an online survey about the curriculum and experiences of a course they are currently taking (or have taken this past summer). They will not be identified in any way in communications with the researcher and their teacher and our school administration will not receive individual student responses.

We appreciate you allowing your son or daughter to participate in this research as it is meant to help the researcher better understand educational practices used today and to share this information for the benefit of the field.

Please contact _____ (school administrator / contact) at _____
(email address or campus phone number) with any questions.

Thank you,

_____ (course teacher)

Appendix K

Indiana University Informed Consent Statement For “Measuring 21st Century Skill Development in Service Learning and Public Good Courses in Independent High Schools”

NOTE: This Informed Consent will be emailed to school administrators (public purpose program staff) who will participate in telephone interviews to provide background information on their schools.

You are invited to participate in this research study that seeks to understand whether high school courses that engage students in service learning or exploring and addressing community issues also help develop students’ “21st century skills.” Your school was selected as a possible participant because of its commitment to fostering in students an interest in social responsibility and the good of the local and global communities.

The study is being conducted by Luana Nissan of Indiana University’s Lilly Family School of Philanthropy.

Study Purpose:

This study intends to explore whether courses that utilize the service learning method or have a public good-orientation promote the development of 21st century skills in high school students in independent (private) schools.

Number Of People Taking Part In The Study:

If you agree to participate, you will be one of 10-20 administrators and teachers who will be participating in this research. Interviews with school administrators / public purpose program staff will provide background information about your school and programs. The faculty completed surveys will provide context about classroom practices and objectives that will relate to the responses received by the larger number of student survey participants (120-250).

Procedures For The Study:

If you agree to be in this study, we ask that you arrange a time with the researcher and participate in a telephone interview that will take no longer than one hour. In advance of this conversation, the researcher will share the interview questions via email. This interview is meant to provide general background factual information about your school and its public purpose activities.

Risks of Taking Part in this Study:

The risks of taking part in this study are minimal. A possible risk of participating in the interview could be discomfort with answering the questions. To minimize this risk, if you become uncomfortable during the interview, please explain that you choose to not continue the interview. This will not impact your school’s participation in the study.

Benefits of Taking Part in this Study:

A school’s participation will allow the school administrator and participating teachers to receive collated data across participating schools that will provide a basic understanding about whether

service learning and public good courses are one way schools can build students' 21st century skills.

Confidentiality for Participants and Institutions:

Your interview will provide only background factual information about your school and its programs. This information will be used to help build a portrait of your school that will be included in this study, though your school's name will be kept confidential. *In the thesis document, compiled notes, interviews, and information analysis, your school's name will be changed and you will not be identified by name or program name.* This information will be archived in the researchers' files for future reference.

Organizations that may inspect and/or copy these research records for quality assurance and data analysis include groups such as the study principal researcher and the Indiana University Institutional Review Board or its designees.

Contacts For Questions Or Problems:

For questions about the study, contact the researcher, Luana Nissan at xxx-xxx-xxxx. If you cannot reach her, please call the Indiana University Human Subjects Office at 317-278-3458 during regular business hours (i.e., 8 a.m. to 5 p.m. Eastern).

For questions about your rights as a research participant, to discuss problems or concerns about a study, or to obtain information or offer input, contact IU Human Subjects Office at 317-278-3458.

Voluntary Nature Of This Study:

Taking part in this study is voluntary. You may choose not to take part or may leave the study at any time.

Your participation may be terminated by the researcher without consent if the timeframe for the study has passed. This would occur if surveys have not been completed by November 12, 2015.

ADMINISTRATOR'S CONSENT

In consideration of all of the above, I choose:

_____ YES, I give my consent to take part in this study by participating in an interview.

_____ NO, I do not give my consent to take part in this study and WILL NOT participate in an interview.

If I have agreed to participate, I will be sent a copy of an informed consent document to keep for my records after completion of my interview.

Administrator's Printed Name: _____

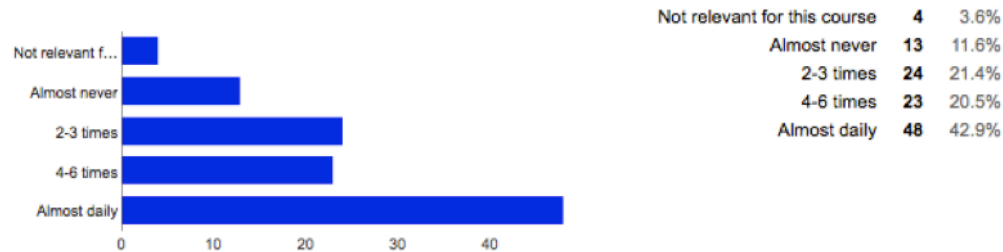
Administrator's Signature: _____ **Date:** _____
(must be dated by administrator)

Printed Name of Person Obtaining Consent: _____

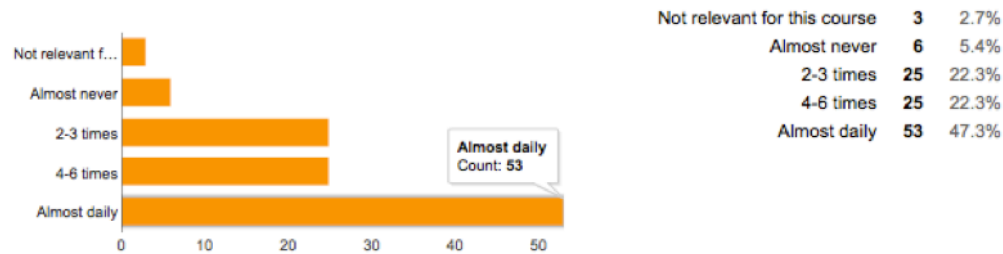
Signature of Person Obtaining Consent: _____ **Date:** _____

Appendix L: Students' Reporting on Critical Thinking Classroom Practices

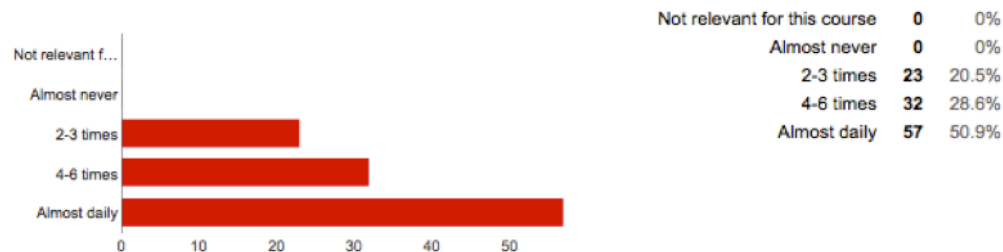
Compare information from different sources before completing a task or assignment? [The choices below are classroom practices that may help you learn CRITICAL THINKING SKILLS. In your COURSE, how often have you been asked to do the following]



Draw your own conclusions based on analysis of numbers, facts, or relevant information? [The choices below are classroom practices that may help you learn CRITICAL THINKING SKILLS. In your COURSE, how often have you been asked to do the following]

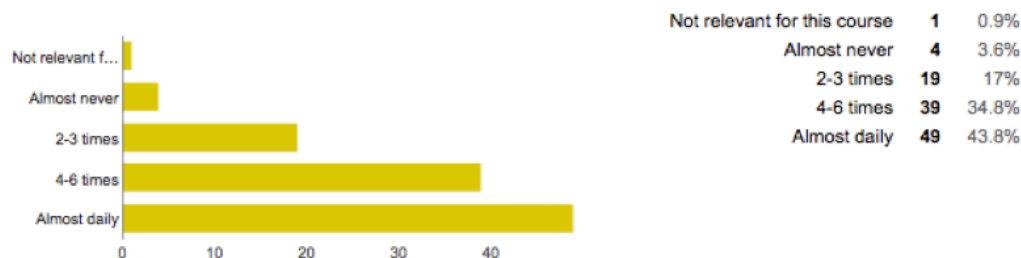


Summarize or create your own interpretation of what you have read or been taught? [The choices below are classroom practices that may help you learn CRITICAL THINKING SKILLS. In your COURSE, how often have you been asked to do the following]

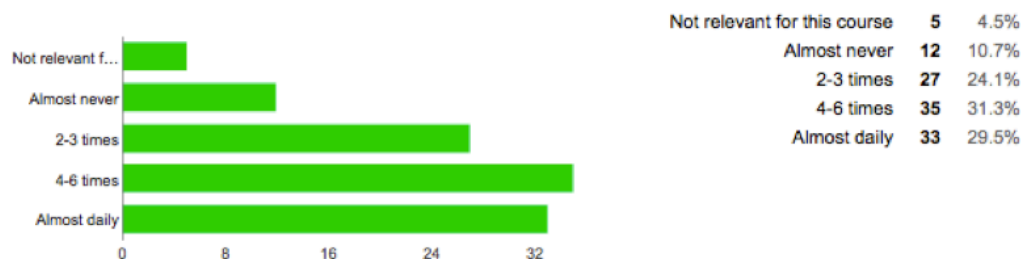


Appendix L Practices (continued): Students' Reporting on Critical Thinking Classroom

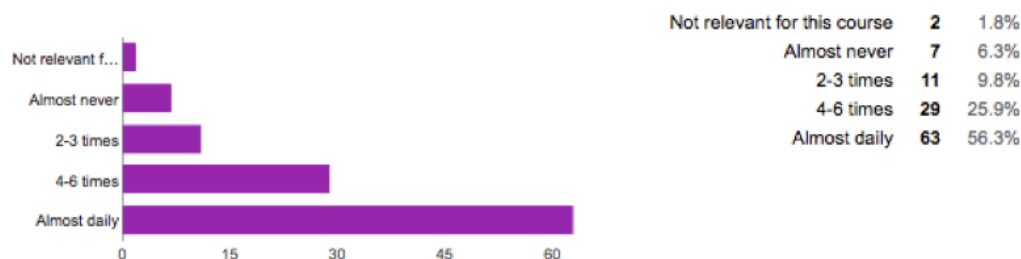
Analyze competing arguments, perspectives or solutions to a problem? [The choices below are classroom practices that may help you learn CRITICAL THINKING SKILLS. In your COURSE, how often have you been asked to do the following]



Develop a persuasive argument based on supporting evidence or reasoning? [The choices below are classroom practices that may help you learn CRITICAL THINKING SKILLS. In your COURSE, how often have you been asked to do the following]

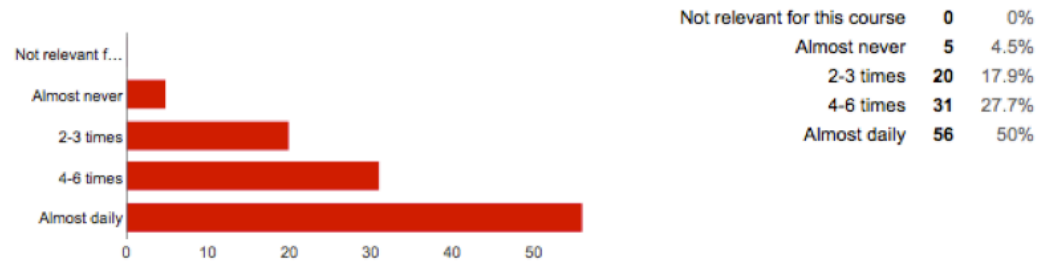


Try to solve complex problems or answer questions that have no single correct solution or answer? [The choices below are classroom practices that may help you learn CRITICAL THINKING SKILLS. In your COURSE, how often have you been asked to do the following]

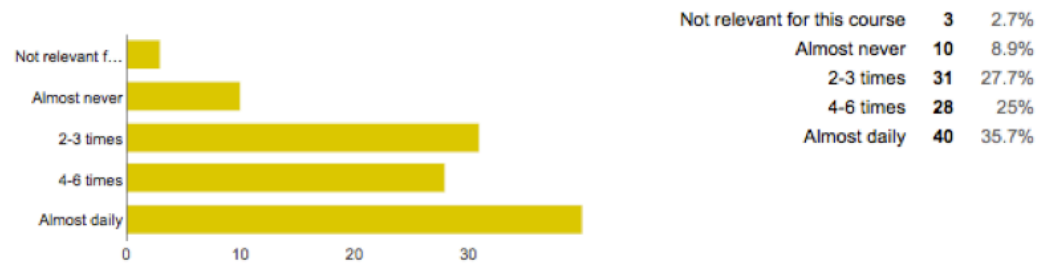


Appendix M: Students' Reporting on Collaboration Classroom Practices

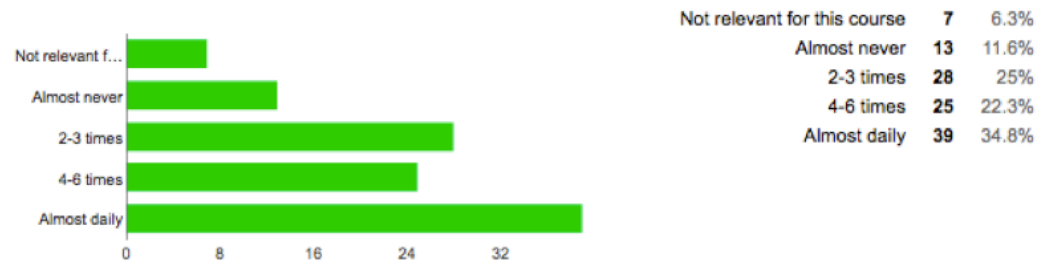
Work in pairs or small groups to complete a task together? [1. The choices below are classroom practices that may help you learn COLLABORATION SKILLS. In your COURSE, how often have you been asked to do the following]



Work with other students to set goals and create a plan for your team? [1. The choices below are classroom practices that may help you learn COLLABORATION SKILLS. In your COURSE, how often have you been asked to do the following]

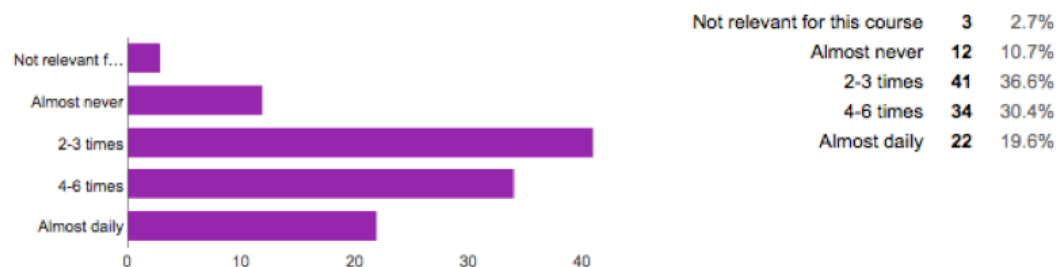


Create joint products using contributions from each student? [1. The choices below are classroom practices that may help you learn COLLABORATION SKILLS. In your COURSE, how often have you been asked to do the following]



Appendix M (continued): Students' Reporting on Collaboration Classroom Practices

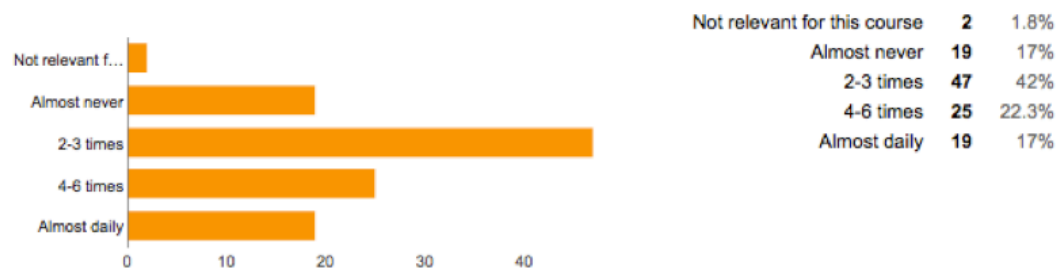
Present your group work to the class, teacher or others? [1. The choices below are classroom practices that may help you learn COLLABORATION SKILLS. In your COURSE, how often have you been asked to do the following]



Work as a team to incorporate feedback on group tasks or products? [1. The choices below are classroom practices that may help you learn COLLABORATION SKILLS. In your COURSE, how often have you been asked to do the following]

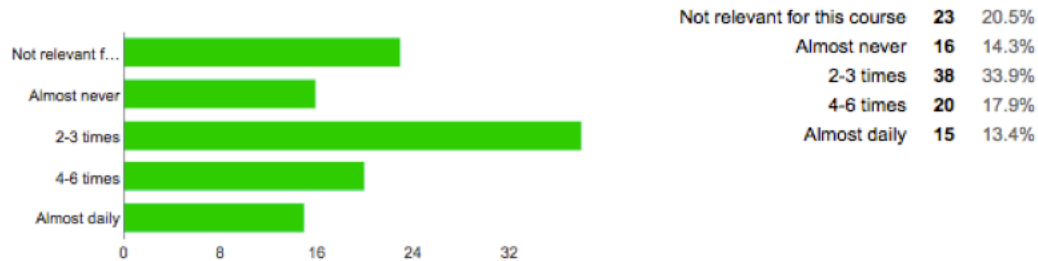


Give feedback to peers or assess other students' work? [1. The choices below are classroom practices that may help you learn COLLABORATION SKILLS. In your COURSE, how often have you been asked to do the following]

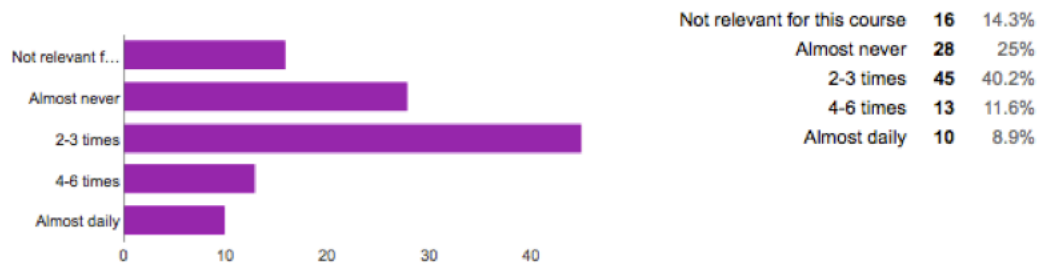


Appendix N: Students' Reporting on Communication Classroom Practices

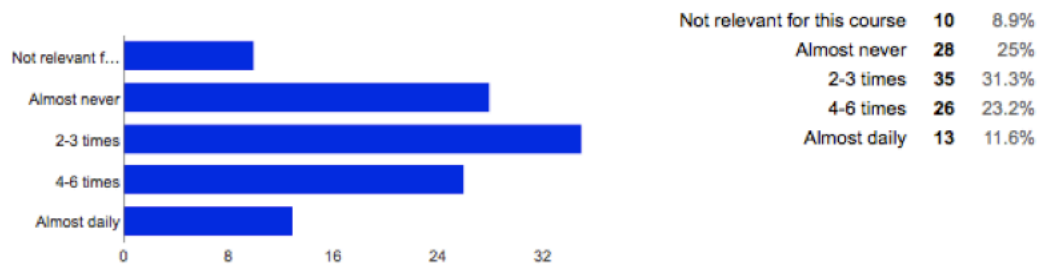
Structure data for use in written products or oral presentations (for example, creating charts, tables or graphs)? [1. The choices below are classroom practices that may help you learn COMMUNICATION SKILLS. In your COURSE, how often have you been asked to do the following]



Convey your ideas using media but NOT in the form of a written paper (for example, posters, videos, blogs, etc.)? [1. The choices below are classroom practices that may help you learn COMMUNICATION SKILLS. In your COURSE, how often have you been asked to do the following]

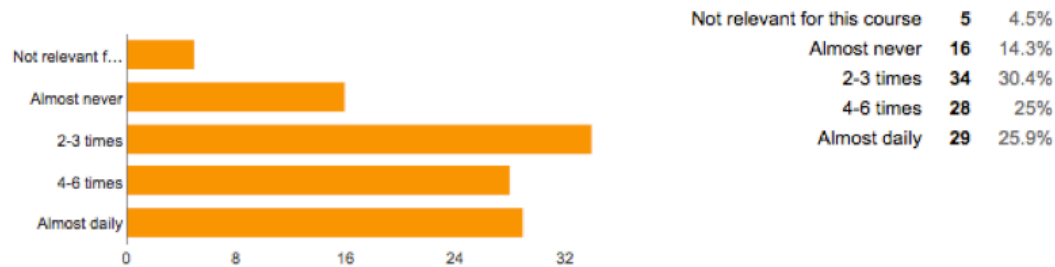


Prepare and deliver an oral presentation to the class, teacher or others? [1. The choices below are classroom practices that may help you learn COMMUNICATION SKILLS. In your COURSE, how often have you been asked to do the following]

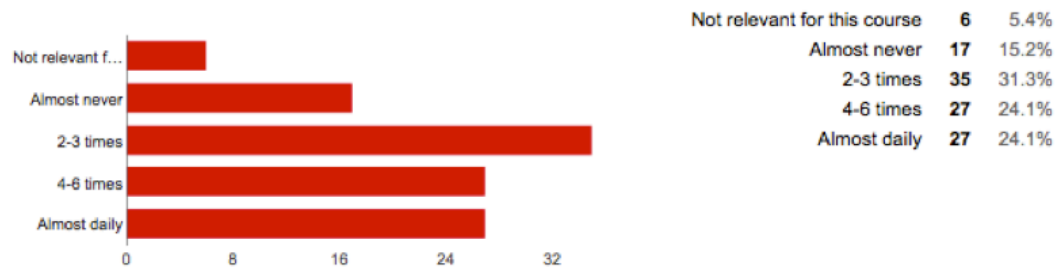


Appendix N (continued): Students' Reporting on Communication Classroom Practices

Answer questions in front of an audience? [1. The choices below are classroom practices that may help you learn COMMUNICATION SKILLS. In your COURSE, how often have you been asked to do the following]

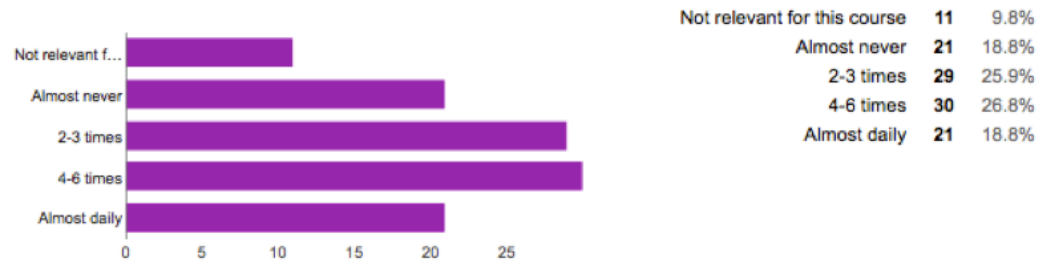


Decide how you will present your work or demonstrate your learning? [1. The choices below are classroom practices that may help you learn COMMUNICATION SKILLS. In your COURSE, how often have you been asked to do the following]

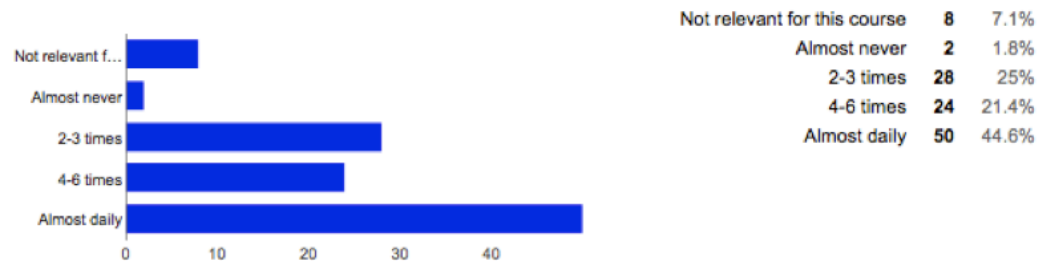


Appendix O: Students' Reporting on Creativity And Innovation Classroom Practices

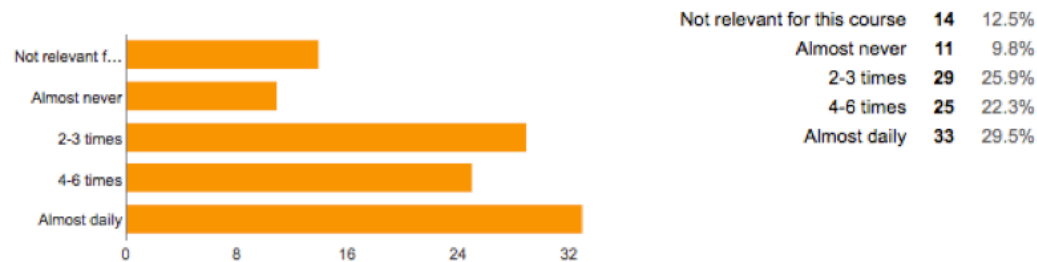
Use idea creation techniques such as brainstorming or concept mapping? [1. The choices below are classroom practices that may help you learn CREATIVITY AND INNOVATION SKILLS. In your COURSE, how often have you been asked to do the following]



Generate your own ideas about how to confront a problem or question? [1. The choices below are classroom practices that may help you learn CREATIVITY AND INNOVATION SKILLS. In your COURSE, how often have you been asked to do the following]

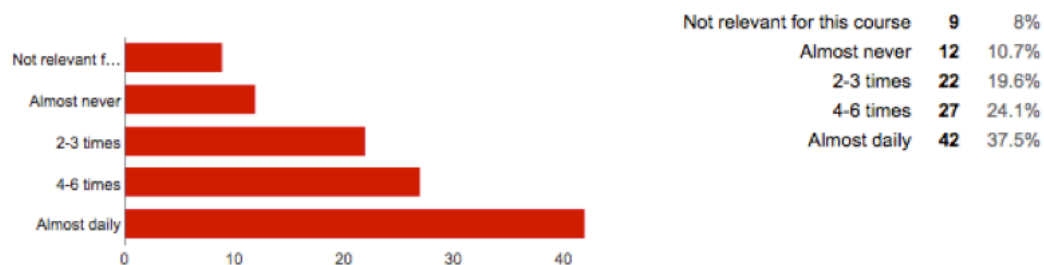


Test out different ideas and work to improve them? [1. The choices below are classroom practices that may help you learn CREATIVITY AND INNOVATION SKILLS. In your COURSE, how often have you been asked to do the following]

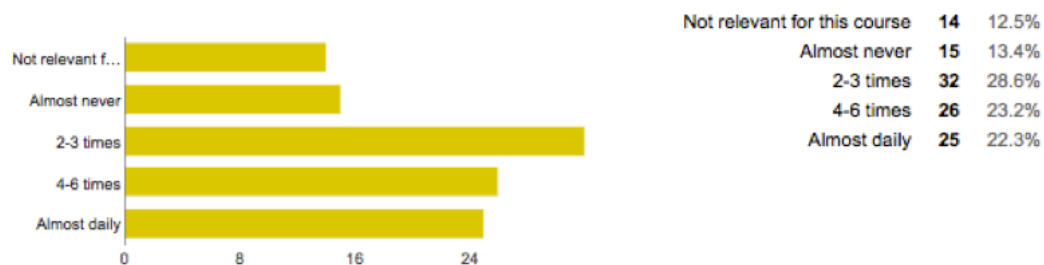


Appendix O (continued): Students' Reporting on Creativity And Innovation Classroom Practices

Invent a solution to a complex, open-ended question or problem? [1. The choices below are classroom practices that may help you learn CREATIVITY AND INNOVATION SKILLS. In your COURSE, how often have you been asked to do the following]

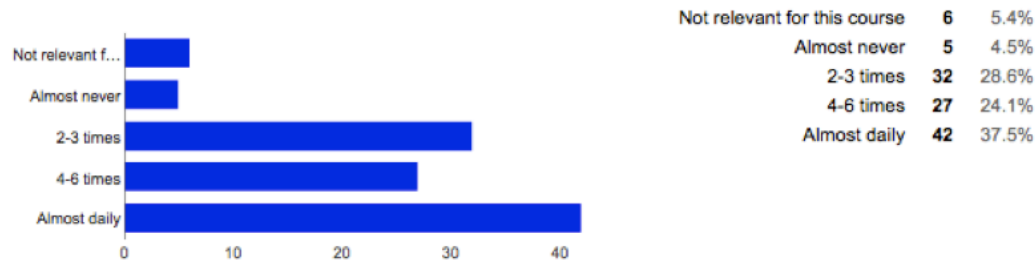


Create an original product or performance to express your ideas? [1. The choices below are classroom practices that may help you learn CREATIVITY AND INNOVATION SKILLS. In your COURSE, how often have you been asked to do the following]

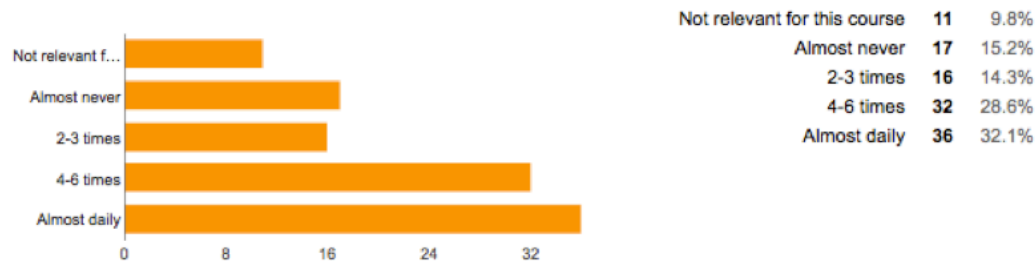


Appendix P: Students' Reporting on Self-Direction Classroom Practices

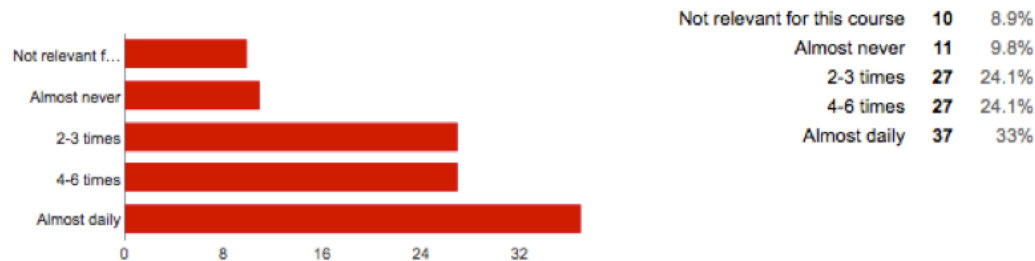
Take initiative when confronted with a difficult problem or question? [1. The choices below are classroom practices that may help you learn SELF-DIRECTION SKILLS. In your COURSE, how often have you been asked to do the following]



Choose your own topics of learning or questions to pursue? [1. The choices below are classroom practices that may help you learn SELF-DIRECTION SKILLS. In your COURSE, how often have you been asked to do the following]

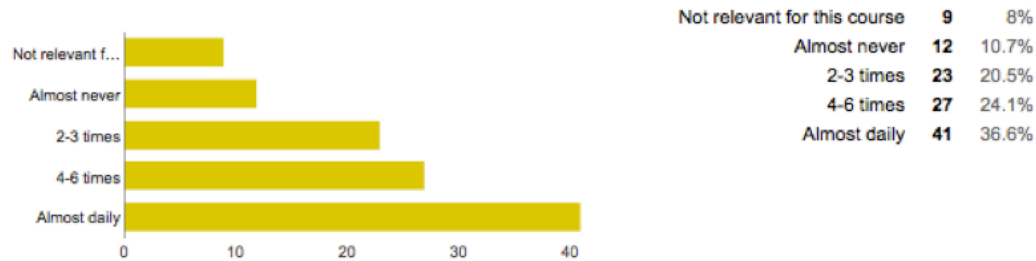


Plan the steps you will take to accomplish a complex task? [1. The choices below are classroom practices that may help you learn SELF-DIRECTION SKILLS. In your COURSE, how often have you been asked to do the following]

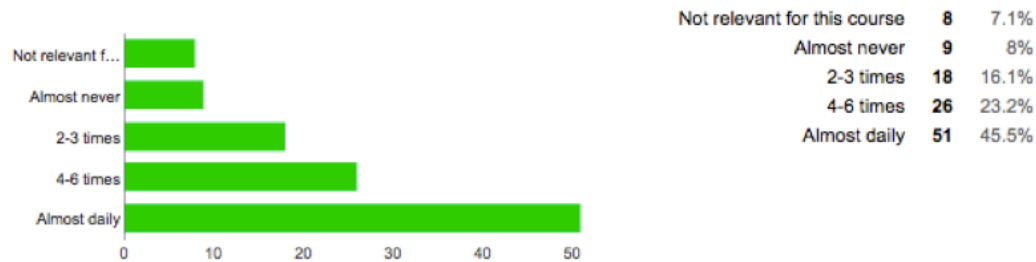


Appendix P (continued): Students' Reporting on Self-Direction Classroom Practices

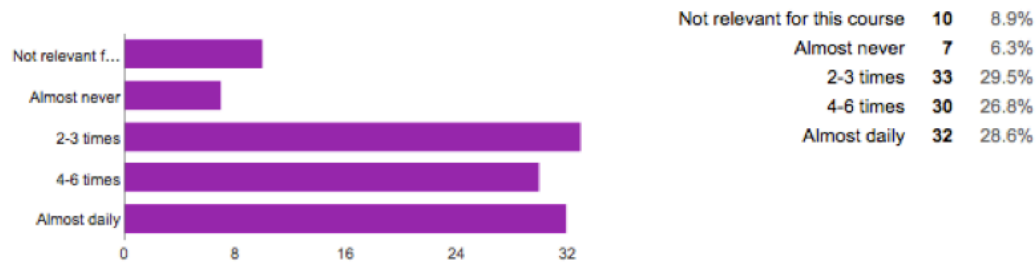
Choose for yourself what examples to study or resources to use? [1. The choices below are classroom practices that may help you learn SELF-DIRECTION SKILLS. In your COURSE, how often have you been asked to do the following]



Monitor your own progress towards completion of a complex task and modify your work accordingly? [1. The choices below are classroom practices that may help you learn SELF-DIRECTION SKILLS. In your COURSE, how often have you been asked to do the following]

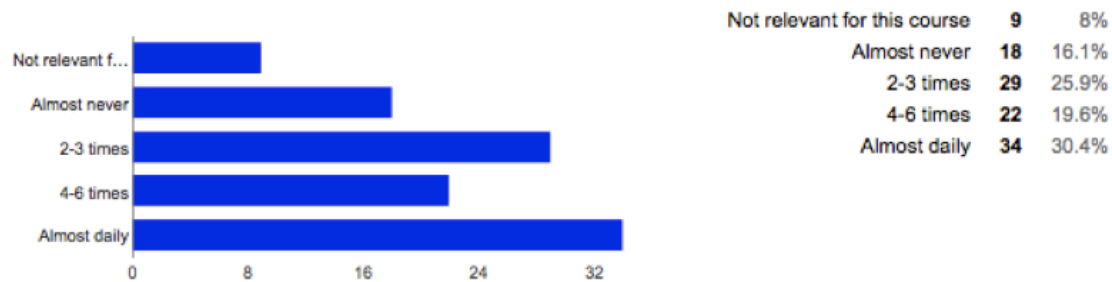


Use specific criteria to assess the quality of your work before it is completed? [1. The choices below are classroom practices that may help you learn SELF-DIRECTION SKILLS. In your COURSE, how often have you been asked to do the following]



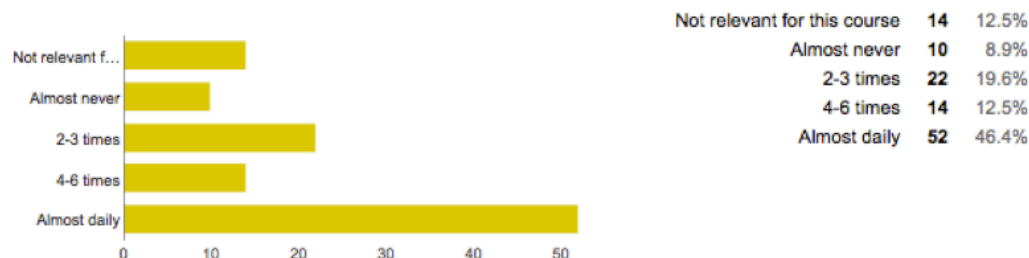
Appendix P (continued): Students' Reporting on Self-Direction Classroom Practices

Use peer, teacher or expert feedback to revise your work? [1. The choices below are classroom practices that may help you learn SELF-DIRECTION SKILLS. In your COURSE, how often have you been asked to do the following]

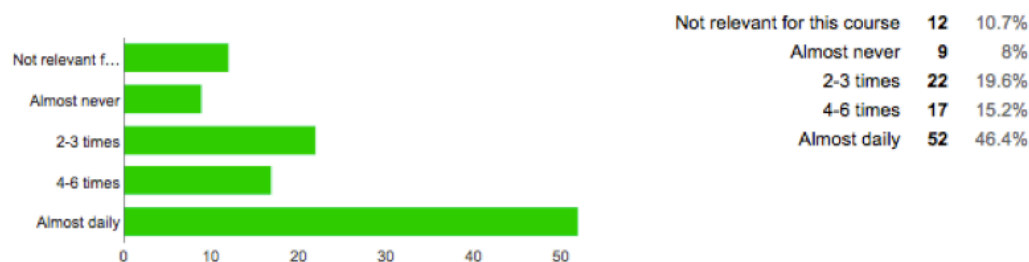


Appendix Q: Students' Reporting on Global Connections Classroom Practices

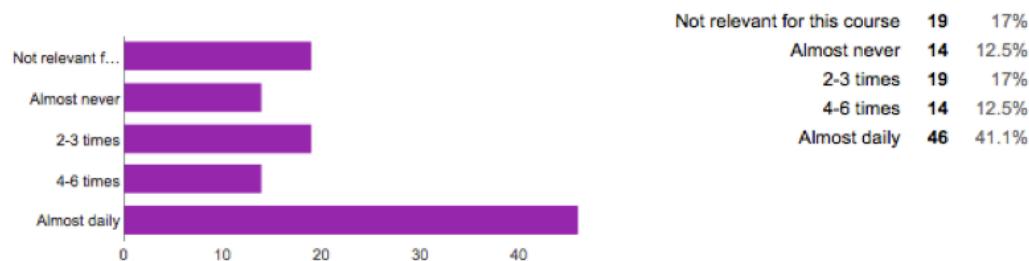
Study information about other countries or cultures? [1. The choices below are classroom practices that may help you learn to make GLOBAL CONNECTIONS. In your COURSE, how often have you been asked to do the following]



Use information or ideas that come from people in other countries or cultures? [1. The choices below are classroom practices that may help you learn to make GLOBAL CONNECTIONS. In your COURSE, how often have you been asked to do the following]

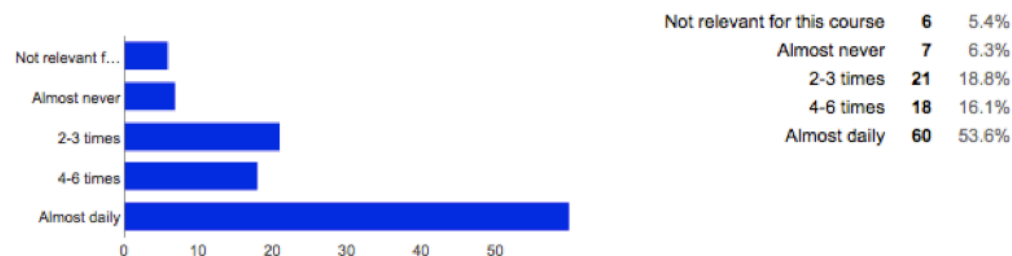


Discuss issues related to global interdependency (for example, global environment trends, global market economy)? [1. The choices below are classroom practices that may help you learn to make GLOBAL CONNECTIONS. In your COURSE, how often have you been asked to do the following]

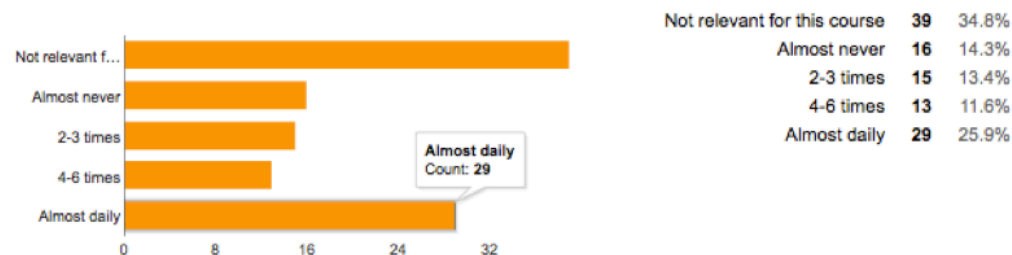


Appendix Q (continued): Students' Reporting on Global Connections Classroom Practices

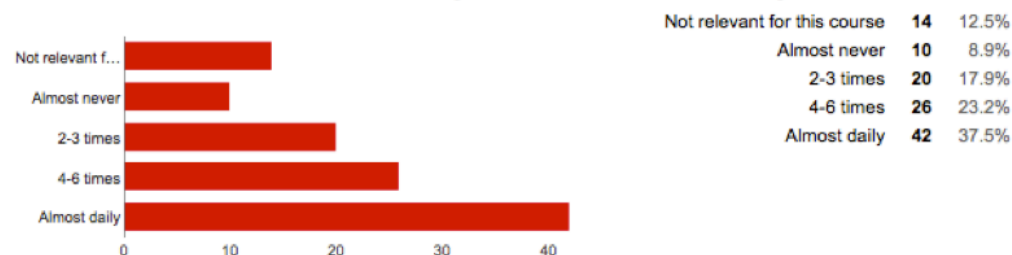
Understand the life experiences of people in cultures besides your own? [1. The choices below are classroom practices that may help you learn to make GLOBAL CONNECTIONS. In your COURSE, how often have you been asked to do the following]



Study the geography of distant countries? [1. The choices below are classroom practices that may help you learn to make GLOBAL CONNECTIONS. In your COURSE, how often have you been asked to do the following]

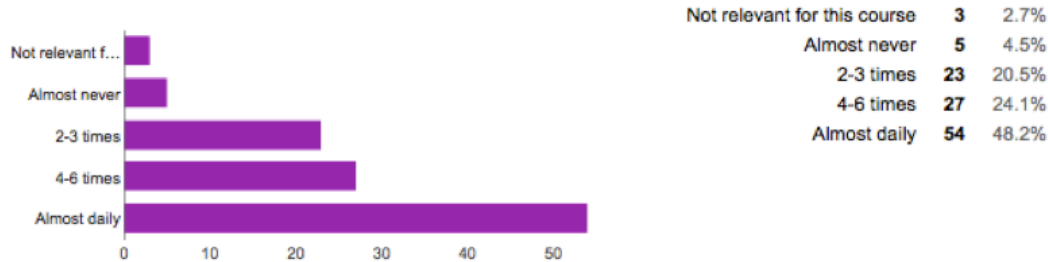


Reflect on how your own experiences and local issues are connected to global issues? [1. The choices below are classroom practices that may help you learn to make GLOBAL CONNECTIONS. In your COURSE, how often have you been asked to do the following]

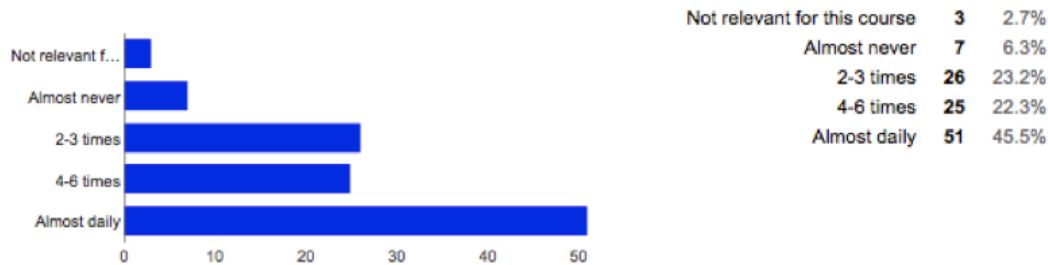


Appendix R: Students' Reporting on Local Connections Classroom Practices

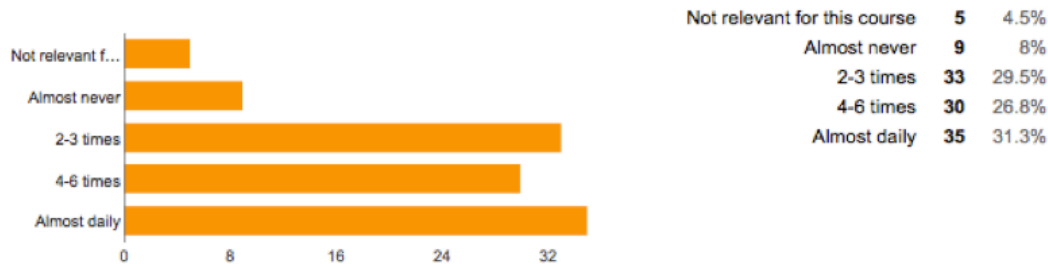
Investigate topics or issues that are relevant to your family or community? [1. The choices below are classroom practices that may help you learn to make LOCAL CONNECTIONS. In your COURSE, how often have you been asked to do the following]



Apply what you are learning to local situations, issues or problems? [1. The choices below are classroom practices that may help you learn to make LOCAL CONNECTIONS. In your COURSE, how often have you been asked to do the following]

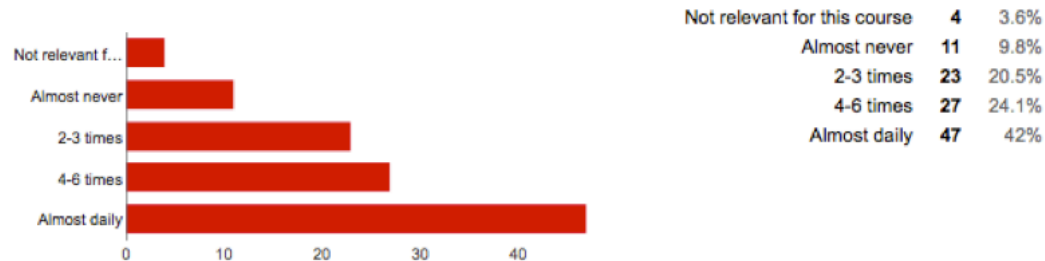


Talk to one or more members of the community about a course project or activity? [1. The choices below are classroom practices that may help you learn to make LOCAL CONNECTIONS. In your COURSE, how often have you been asked to do the following]

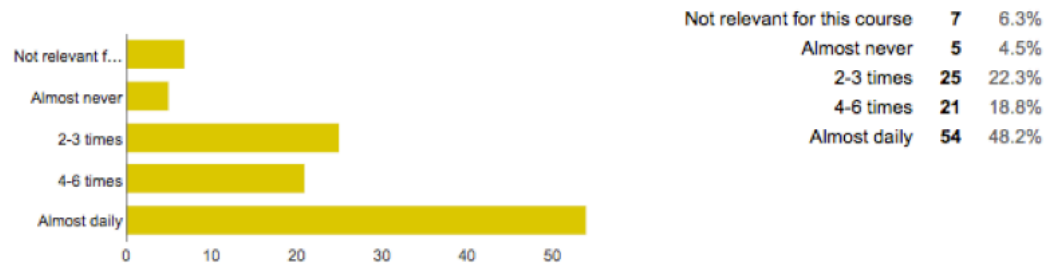


Appendix R (continued): Students' Reporting on Local Connections Classroom Practices

Analyze how different stakeholder groups or community members view an issue? [1. The choices below are classroom practices that may help you learn to make LOCAL CONNECTIONS. In your COURSE, how often have you been asked to do the following]

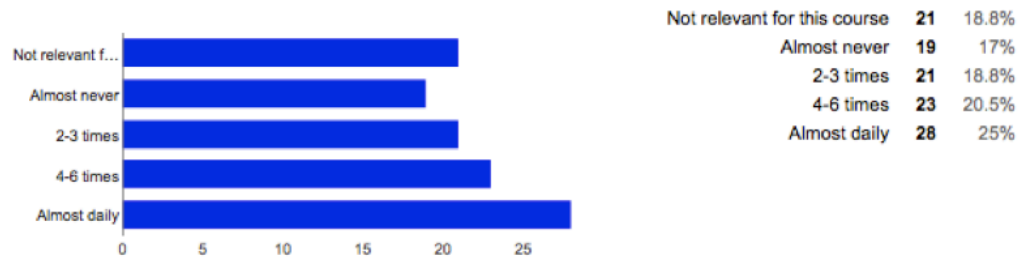


Respond to a question or task in a way that weighs the concerns of different community members or groups? [1. The choices below are classroom practices that may help you learn to make LOCAL CONNECTIONS. In your COURSE, how often have you been asked to do the following]

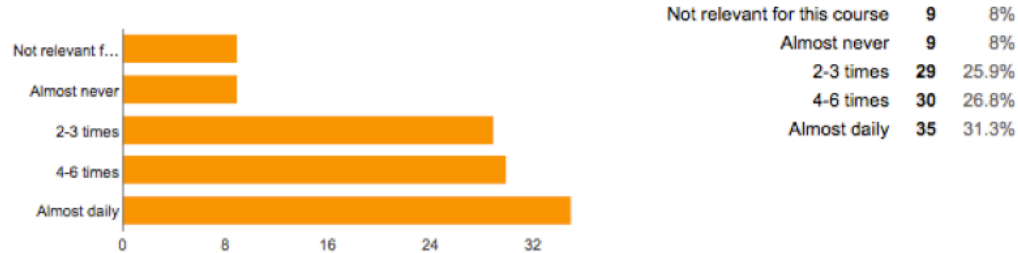


Appendix S: Students' Reporting on Use of Technology As A Tool For Learning Classroom Practices

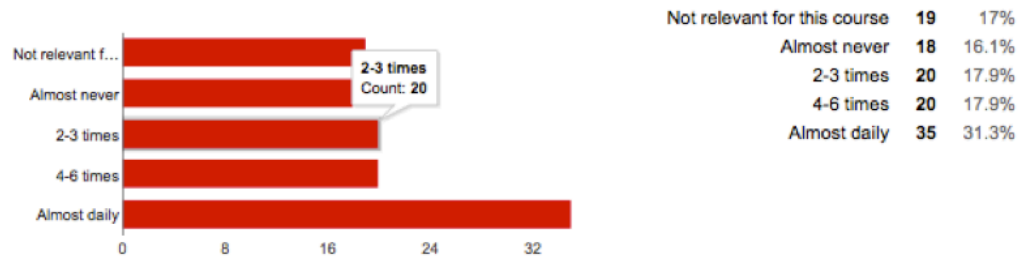
Use technology or the Internet for self-instruction (for example, Kahn Academy or other videos, tutorials, self-instructional websites, etc.)? [1. The choices below are classroom practices that may help you learn to USE TECHNOLOGY as a TOOL FOR LEARNING. In your COURSE, how often have you been asked to do the following]



Select appropriate technology tools or resources for completing a task? [1. The choices below are classroom practices that may help you learn to USE TECHNOLOGY as a TOOL FOR LEARNING. In your COURSE, how often have you been asked to do the following]

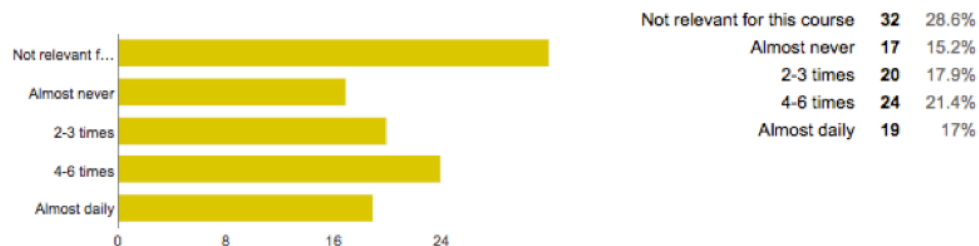


Evaluate the credibility and relevance of online resources? [1. The choices below are classroom practices that may help you learn to USE TECHNOLOGY as a TOOL FOR LEARNING. In your COURSE, how often have you been asked to do the following]

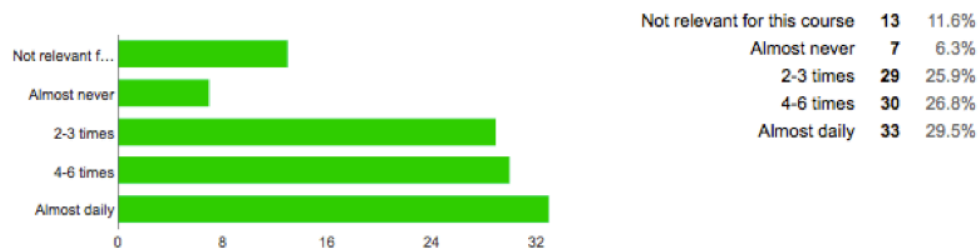


Appendix S (continued): Students' Reporting on Use of Technology As A Tool For Learning Classroom Practices

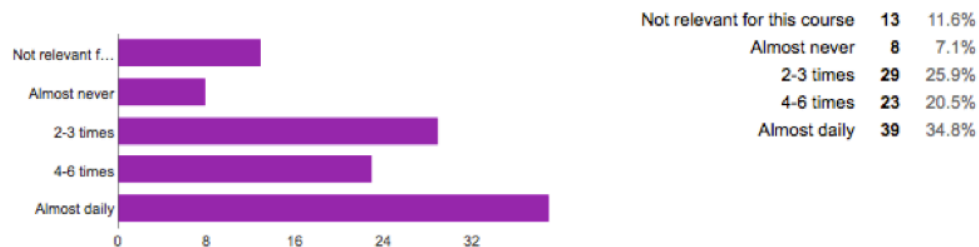
Use technology to analyze information (for example, databases, spreadsheets, graphic programs, etc.)? [1. The choices below are classroom practices that may help you learn to USE TECHNOLOGY as a TOOL FOR LEARNING. In your COURSE, how often have you been asked to do the following]



Use technology to help you share information (for example, multi-media presentations using sound or video, presentation software, blogs, podcasts, etc.)? [1. The choices below are classroom practices that may help you learn to USE TECHNOLOGY as a TOOL FOR LEARNING. In your COURSE, how often have you been asked to do the following]

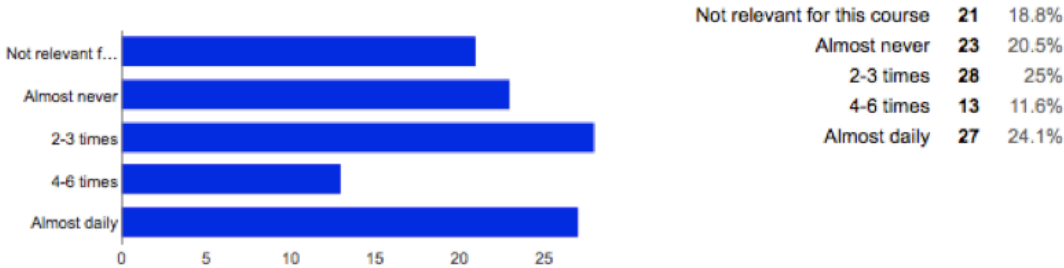


Use technology to support teamwork or collaboration (for example, shared work spaces, email exchanges, giving and receiving feedback, etc.)? [1. The choices below are classroom practices that may help you learn to USE TECHNOLOGY as a TOOL FOR LEARNING. In your COURSE, how often have you been asked to do the following]

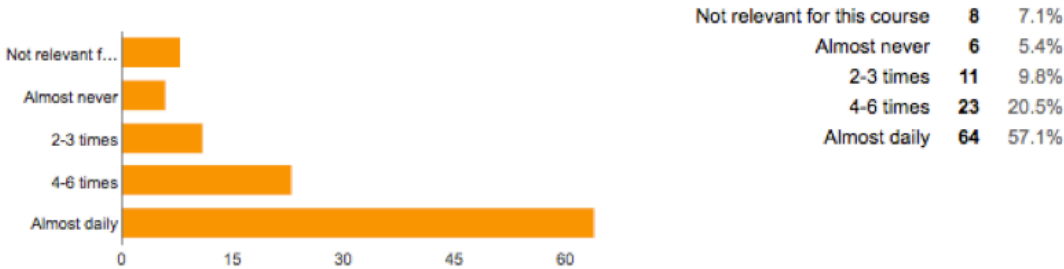


Appendix S (continued): Students' Reporting on Use of Technology As A Tool For Learning Classroom Practices

Use technology to interact directly with experts or members of local/global communities? [1. The choices below are classroom practices that may help you learn to USE TECHNOLOGY as a TOOL FOR LEARNING. In your COURSE, how often have you been asked to do the following]



Use technology to keep track of your work on extended tasks or assignments? [1. The choices below are classroom practices that may help you learn to USE TECHNOLOGY as a TOOL FOR LEARNING. In your COURSE, how often have you been asked to do the following]



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pedagogical goals. *Political Science and Politics*, 37(2), 241-247.

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Zuboff, S. & Maxmin, J. (2002). *The support economy: Why corporations are failing individuals and the next episode of capitalism*. London: Viking Penguin.

CURRICULUM VITAE

Luana G. Nissan

Education

- M.A. Indiana University. Philanthropic Studies. 2016.
B.S. Indiana University-Purdue University Indianapolis. Secondary Education–English. 1998.
B.A. University of Illinois at Urbana-Champaign. Rhetoric–English. 1995.

Professional Experience

Catalysts For Good, Strategist and Founder, Indianapolis 2013-present

- Research, strategy and facilitation work with PK-12 schools interested in creating or growing a guiding framework for holistic youth civic engagement, service learning, community service and philanthropy education. This framework can include a vision, mission / purpose, guiding principles / philosophy, common language, team(s) and action plans that support the mission, strategic plan, and culture of the school.
- Types of consulting to support institutional needs: (a) research to discover opportunities, challenges, models and catalysts (research includes, conducting key stakeholder interviews, facilitating focus groups, and identifying models from other schools); (b) facilitation of visioning and planning meetings to develop a strategic guiding framework and action plans; and (c) writing and editing of research reports and guiding documents.

The Glenn Institute for Philanthropy and Service Learning, Director 2008-2012 The Westminster Schools, Atlanta

- Identified resources and coordinated professional development for faculty and training for students in service learning and philanthropy.
- Conducted research, wrote reports and worked with team and advisory board to guide Institute's strategic development and raise school community's understanding of philanthropy education, service learning and public purpose.
- Founded the Philanthropy Education and Service Learning Consortium to promote dialogue, sharing, and professional development for community service and service learning coordinators and program directors in independent schools. Grew in three years to involve 55 members from 37 schools.
- Raised profile of Glenn Institute models nationally in independent school community resulting in other schools' development of philanthropy courses, service learning, public purpose strategic planning, and a philanthropic studies center.
- Increased parent and faculty engagement and community awareness of Institute's programs. Led Glenn team's development and implementation of marketing plan that included brand marking, videos, and national conference presentations.

**Networks Financial Institute, Curriculum Specialist
Indiana State University, Indianapolis**

2007-2008

- Revised *Kids Count*[™] financial literacy curriculum for elementary school students; bolstered financial giving and volunteering content.
- Developed financial literacy board game, *Kids Count: The Fun Game of Dollars and Sense*[™].

Writing and Research Services, Principal, Indianapolis

2000-2007

- Conducted research (including literature reviews and focus group facilitation); and developed and edited research reports on philanthropic, nonprofit, and education-related topics (such as, service learning, collaboration, and youth philanthropy).
- Developed and edited education resources for Learning To Give.
- Conducted grant research and wrote proposals for grants from foundations and donors.

Habits of the Heart Project, Director

1998-1999

The Center on Philanthropy and Indiana Humanities Council, Indianapolis

- Managed a cross-institutional collaboration to create training and curricula that encouraged philanthropy in youth organizations, congregations, and schools.
- Analyzed educational and youth development curricula and resources to identify those containing philanthropic lessons.

Transmitting the Philanthropic Tradition to Youth, Research Assistant

1995-1998

The Center on Philanthropy at Indiana University, Indianapolis

- Conducted research and assisted writing of first literature review capturing influences on children's giving and serving behaviors.
- Analyzed youth organization materials and programs for philanthropic lessons.

Publications

"Oral Histories of Pioneers in Youth Philanthropy and Service Learning." Produced and conducted interviews for this video project documenting stories of early leaders. 2011.

Burlingame, D. F. & Nissan, L. G. *Pathways: Growing Philanthropy in Indian Country*. Reports on Fundraising and Philanthropy, vol. 1. Indianapolis: The Center on Philanthropy at Indiana University. 2008.

Falk, K. H. & Nissan, L. G. *A Vision for and Brief History of American Youth Philanthropy*. Arlington, VA: Association of Fundraising Professionals. 2007.

Nissan, L. G. *Equity and Philanthropy: A Report of a Conference of Foundation Leaders*. Indianapolis: The Center on Philanthropy at Indiana University. 2007.

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Nissan, L. G. *Service Learning: General Information, Best Practices, Resources, and Catholic Values*. Unpublished manuscript for Cathedral High School, Indianapolis. 2006.

Nissan, L. G. *Challenges Facing Philanthropy: A Summary of the 2004 Philanthropy Summit*. Indianapolis: The Center on Philanthropy at Indiana University. 2004.

Nissan, L. G. & Burlingame, D. F. *Collaboration Among Institutions: Strategies for Nonprofit Management Education Programs*. Indianapolis: The Center on Philanthropy at Indiana University. 2003.

Agard, K. A., Bielefeld, W., Howbert, S. & Nissan, L. G. *Learning To Give: A Family Foundation Guidebook for Raising Kids Who Give, Share, and Care*. Muskegon, MI: Council of Michigan Foundations. 2001.

Bentley, R. J. & Nissan, L. G. *The Roots of Giving and Serving: A Literature Review Studying How School-Age Children Learn the Philanthropic Tradition*. 1996.

Selected Conference and Professional Presentations

Huff, B. & Nissan, L. G. "The Role of Vision in Building a Public Purpose Program." Webinar for Philanthropy Education and Service Learning Consortium. October 2012.

Ballengee, J. & Nissan, L. G. "The Role of Marketing and Communications in Public Purpose Work." Private Schools with Public Purpose Symposium, Lakeside School, Seattle, Washington. April 2012.

Nissan, L. G. "Defining the Scope of Public Purpose Work in Independent Schools." Webinar for Philanthropy Education and Service Learning Consortium. January 2012.

Nissan, L. G. "Inspiring a Moral Imagination: The History and Economics of Philanthropy in the U.S." Georgia Independent Schools Association Conference, Kennesaw, Georgia. November 2011.

Finch, S., Nissan, L. G. & Ransome, W. "Money Sense: Why Financial Literacy Skills Matter for Today's Students." National Association of Independent Schools Conference, Maryland. February 2011.

Nissan, L. G. & Thorne, M.J. "Public Purpose Premium Tastings: Advancing Our Public Purpose." National Association of Independent Schools Conference, Maryland. February 2011.

Nissan, L. G. "K-12 Philanthropy Education: A Framework for Values, Knowledge and Action for the Common Good." Florida Council of Independent Schools' Conference, Jacksonville, and Georgia Independent Schools Association Conference, Atlanta. November 2010.

Aldrich, D., Nissan, L. G. & Salwen, K. "More Than Money: Engaging Students in 21st Century Philanthropy." National Coalition of Girls' Schools Conference, New Orleans. June 2010.

Nissan, L. G. "Making Public Purpose Part of Your School's Mission." INMAX Annual Meeting, Lick-Wilmerding High School, San Francisco. June 2010.

Nissan, L. G. "K-12 Philanthropy Education: A Framework for Values, Academics, and Action Promoting Public Purpose." Private Schools with Public Purpose Symposium, Lick-Wilmerding High School, San Francisco. April 2010.

Service

Youth Giving Advisory Committee, Foundation Center. 2014-present.

IMAGINE Advisory Board, The Orchard School, Indianapolis. 2014-present.

Youth Philanthropy Initiative of Indiana (YPII) Steering Committee, Indiana Philanthropy Initiative, Indianapolis. 2013-present.

Grab the Torch advisor, Boston. 2013-present.

National Content Advisory Committee, Learning to Give. 2010-2012.

ISACS (Independent Schools Association of the Central States) Visiting Team, Hathaway Brown School, Cleveland. 2010

Grants Review Committee, Susan G. Komen for the Cure-Indianapolis Affiliate, Indianapolis. 2006-2008.